

FLOOD INSURANCE STUDY

FEDERAL EMERGENCY MANAGEMENT AGENCY

VOLUME 5 OF 10



DUVAL COUNTY, FLORIDA (ALL JURISDICTIONS)

COMMUNITY NAME	COMMUNITY NUMBER
ATLANTIC BEACH, CITY OF	120075
BALDWIN, TOWN OF*	120076
JACKSONVILLE, CITY OF	120077
JACKSONVILLE BEACH, CITY OF	120078
NEPTUNE BEACH, CITY OF	120079

*No Special Flood Hazard Areas Identified



FEMA

PRELIMINARY
7/29/2016

REVISED:

<DATE>

FLOOD INSURANCE STUDY NUMBER
12031CV005B

Version Number 2.3.3.2

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Coastal Transect Profiles	<u>Panel</u>
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Transect 52	156 P
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Transect 54	158 P
Transect 55	159 P

Transect 56	160 P
Transect 57	161 P
Transect 58	162 P
Transect 59	163 P
Transect 60	164 P
Transect 61	165 P
Transect 62	166 P
Transect 63	167 P
Transect 64	168 P
Transect 65	169 P
Transect 66	170 P
Transect 67	171 P
Transect 68	172 P

Published Separately

Flood Insurance Rate Map (FIRM)

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
10010S		0				5.4 ²	3.3 ³	4.0	0.7
10015	C10015	472	53	237	1.4	5.5 ²	3.4 ³	4.1	0.7
10065	C10065	2,731	50	239	0.3	6.4 ²	6.1 ³	6.3	0.2
10074	C10074	3,492	37	217	0.6	6.4 ²	6.1 ³	6.4	0.3
10075	C10075	4,435	33	251	0.7	6.4 ²	6.2 ³	6.6	0.4
10079	C10079	5,522	35	235	0.2	6.4 ²	6.2 ³	6.6	0.4
10080	C10080	6,657	36	339	0.5	6.4 ²	6.2 ³	6.6	0.4
10082	C10082	7,243	32	127	0.5	6.4 ²	6.2 ³	6.6	0.4
10085	C10085	8,340	32	164	0.1	6.5 ²	6.2 ³	6.6	0.4
10096	C10096	9,579	217	292	0.5	6.7 ²	6.4 ³	6.9	0.5
10097	C10097	10,161	63	311	0.4	6.7 ²	6.4 ³	6.9	0.5
10099	C10099	10,631	33	318	1.1	6.7 ²	6.5 ³	6.9	0.4

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above Wonderwood Drive.

²Combined coastal and riverine effects from Atlantic Ocean and Sherman Creek

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FLORIDA
 (ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SHERMAN CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
10100	C10100	10,687	25	319	2.1	6.8 ²	6.5 ³	7.0	0.5
10112	C10112	11,621	62	228	0.5	6.8 ²	6.5 ³	7.0	0.5
10113	C10113	12,753	67	135	0.2	6.8 ²	6.5 ³	7.0	0.5
10121	C10121	13,722	140	234	0.4	6.9 ²	6.7 ³	7.0	0.3
10135	C10135	14,207	107	163	0.8	6.9 ²	6.6 ³	6.8	0.2

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above Wonderwood Drive.

²Combined coastal and riverine effects from Atlantic Ocean and Sherman Creek

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FLORIDA
 (ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SHERMAN CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
20020S		0				6.3 ²	5.5 ³	5.5	0.0
	C21002		60	331	2.3				
21002		1,141				6.4 ²	5.8 ³	5.8	0.0
	C21006		38	331	2.0				
21006		1,291				6.6 ²	6.2 ³	6.2	0.0
	C21015		40	314	2.8				
21015		1,537				7.2 ²	6.9 ³	6.9	0.0
	C21025		65	314	0.8				
21025		2,600				7.3 ²	7.0 ³	7.0	0.0
	C21036		45	313	1.8				
21036		3,473				7.3 ²	6.0 ³	6.0	0.0
	C21040		66	313	1.1				
21040		4,669				7.3 ²	6.3 ³	6.4	0.1
	C21042		32	428	1.7				
21042		4,709				7.3 ²	6.3 ³	6.4	0.1
	C21060		32	413	1.1				
21060		5,729				7.3 ²	6.4 ³	6.8	0.4
	C21070A		32	294	0.9				
21070A		6,111				7.3 ²	6.4 ³	6.8	0.4
	C21070B		35	286	1.0				
21070B		6,123				7.3 ²	6.4 ³	6.9	0.5
	C21080		35	294	0.8				
10095		6,243				7.3 ²	6.4 ³	6.9	0.5

¹Feet upstream of confluence with Puckett Creek

²Combined coastal and riverine effects from Atlantic Ocean and Sherman Creek

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SHERMAN CREEK CANAL

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
30000		0				**	1.7 ³	1.7	0.0
30003	C30003	668	142	1,775	1.8	**	1.9 ³	2.0	0.1
30004	C30004	1,366	114	1,775	2.3	**	2.4 ³	2.6	0.2
30005	C30005	2,071	110	1,776	1.7	**	2.6 ³	2.9	0.3
30011	C30011	3,188	207	1,429	3.0	5.0 ²	3.9 ³	4.8	0.9
30012	C30012	4,316	461	1,431	1.6	5.2 ²	4.5 ³	5.2	0.7
30013	C30013	5,048	339	1,481	1.0	5.3 ²	4.7 ³	5.3	0.6
30015	C30015	6,061	177	1,089	0.9	5.4 ²	4.7 ³	5.5	0.8
30017	C30017	7,021	119	1,123	1.0	5.7 ²	5.1 ³	6.0	0.9

¹Feet above confluence with Pottsburg Creek

²Combined coastal and riverine effects from Atlantic Ocean and Silversmith Creek

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

**Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SILVERSMITH CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
0101	C0110 C0120 C0123 C0125 C0126 C0127 C0128 C0129 C0130	0	600	331	0.4	80.7	80.7	81.6	0.9
0110		972	174	333	1.1	80.8	80.8	81.7	0.9
0120		1,365	270	406	2.3	81.7	81.7	82.5	0.8
0123		2,314	300	509	0.9	81.9	81.9	82.7	0.9
0125		2,839	364	572	0.7	81.9	81.9	82.8	0.9
0126		3,357	524	628	0.6	81.9	81.9	82.8	1.0
0127		3,960	833	666	0.7	81.9	81.9	82.9	1.0
0128		4,433	643	689	0.6	81.9	81.9	82.9	1.0
0129		4,976	2,253	700	0.6	81.9	81.9	83.0	1.0
0130		5,220				82.0	82.0	83.0	1.0

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above Beaver Street.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY DUVAL COUNTY, FLORIDA (ALL JURISDICTIONS)	FLOODWAY DATA
		FLOODING SOURCE: ST. MARY'S RIVER TRIBUTARY

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
40000		0				**	1.7 ²	1.7	0.0
40002	C40002	1,098	458	1,837	1.6	**	4.0 ²	4.5	0.5
40005	C40005	2,434	441	1,843	1.3	5.5	5.5	5.9	0.4
40006	C40006	3,236	589	1,785	2.9	7.8	7.8	7.9	0.1
40007	C40007	4,087	703	1,837	0.8	8.0	8.0	8.5	0.5
40011	C40011	4,723	562	1,809	0.5	8.4	8.4	8.9	0.5
40012	C40012	5,230	400	1,806	0.5	8.4	8.4	9.0	0.6
40013	C40013	6,082	505	2,219	0.9	8.5	8.5	9.2	0.7
40014L2	C40014L2	7,159	261	1,998	1.7	9.3	9.3	10.1	0.8
40014L1	C40014L1	8,130	344	2,050	1.3	10.5	10.5	11.1	0.6
40015	C40015	8,626	107	2,093	1.9	11.5	11.5	12.4	0.9
40017	C40017	9,792	185	1,881	1.1	12.6	12.6	13.5	0.9

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above confluence with Pottsburg Creek.

²Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

**Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevations

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY DUVAL COUNTY, FLORIDA (ALL JURISDICTIONS)	FLOODWAY DATA
		FLOODING SOURCE: STRAWBERRY CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
40025	C40025	10,877	90	1,202	3.1	14.9	14.9	15.0	0.1
40034	C40034	11,815	104	1,207	3.2	19.9	19.9	19.9	0.0
40035	C40035	12,996	323	1,415	1.7	20.1	20.1	20.1	0.0
40036	C40036	13,536	262	848	1.5	20.6	20.6	20.6	0.0
40037	C40037	14,425	160	856	1.8	24.3	24.3	24.3	0.0
40044	C40044	15,242	214	897	0.1	26.5	26.5	26.5	0.0
40045	C40045	16,429	87	905	0.1	30.7	30.7	30.7	0.0
40053	C40053	16,831	60	388	0.0	30.7	30.7	30.7	0.0
40055	C40055	17,269	77	388	2.0	31.4	31.4	31.4	0.0
40063	C40063	18,189	89	387	0.6	33.0	33.0	33.0	0.0
40065	C40065	19,153	192	387	3.0	33.9	33.9	33.9	0.0

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above confluence with Pottsburg Creek.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY DUVAL COUNTY, FLORIDA (ALL JURISDICTIONS)	FLOODWAY DATA
		FLOODING SOURCE: STRAWBERRY CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
40066	C40066	19,793	178	334	2.4	34.0	34.0	34.0	0.0
40066L2	C40066L2	20,970	68	337	1.4	34.2	34.2	34.2	0.0
40067	C40067	22,038	55	342	2.3	34.9	34.9	34.9	0.0

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above confluence with Pottsburg Creek.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: STRAWBERRY CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
30023		0				8.6	8.6	9.6	1.0
	C32005	1,540	586	841	2.2	8.6	8.6	9.6	1.0
	C32042	4,499	238	704	3.7	12.5	12.5	12.5	0.0
	C32044		281	555	2.4				
32044	C32045	5,206	354	555	2.6	13.3	13.3	13.3	0.0
32045	C32060	5,864	58	555	3.3	14.2	14.2	14.2	0.0
32060	C32072	6,373	194	452	3.5	18.0	18.0	18.0	0.0
32072	C32075AP	7,144	184	555	1.9	19.5	19.5	19.5	0.0
32075AP		7,877	215	474	2.6	20.0	20.0	20.0	0.0
32091	C32091	9,278				20.8	20.8	20.8	0.0

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above confluence with Julington Creek.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: SWEETWATER CREEK

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
D	51,799	1,253 / 1,165 ²	3,100	2.3	5.3 ³	2.8 ⁴	3.0	0.2
E	98,362	1,701 / 0 ²	14,470	0.5	9.7	9.7	10.5	0.8
F	129,680	1,296 / 594 ²	13,609	0.5	13.5	13.5	14.4	0.9
G	141,097	1,128 / 604 ²	9,189	0.6	14.9	14.9	15.9	1.0
H	147,066	1,926 / 666 ²	15,357	0.4	16.9	16.9	17.9	1.0
I	163,070	865 / 810 ²	5,862	0.8	18.8	18.8	19.8	1.0

¹Feet above Main Street

²Width/width within Duval County

³Combined coastal and riverine effects from Atlantic Ocean and Nassau River/Thomas Creek

⁴Elevations without considering storm surge effects from Atlantic Ocean

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: THOMAS CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
20053	C21002 C21005	0	358	1,532	3.0	13.8	13.8	14.6	0.8
21002		126	182	1,533	2.4	14.2	14.2	15.0	0.8
21004		638				15.9	15.9	16.8	0.9

¹Feet above confluence with Pottsburg Creek

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TIGER HOLE SWAMP

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
20001		0				*	2.8 ³	3.2	0.4
21002	C21002	1,526	45	1,673	3.4	*	4.5 ³	5.5	1.0
21003	C21003	2,526	235	1,704	3.0	7.1 ²	5.8 ³	6.5	0.7
21004	C21004	3,826	22	680	4.2	9.0	9.0	9.8	0.8
21005	C21005	4,826	20	685	6.5	14.0	14.0	14.3	0.3
21007	C21007	6,401	14	346	2.1	18.0	18.0	18.3	0.3

¹Feet above confluence with Mount Pleasant Creek

²Combined coastal and riverine effects from Atlantic Ocean and Tiger Pond Creek

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TIGER POND CREEK

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
40000		0				**	1.8 ³	1.8	0.0
	C40025		59	3,031	3.5				
40025		917				5.3 ²	3.8 ³	4.1	0.3
	C40041		48	2,649	3.1				
40041		1,979				5.4 ²	4.3 ³	4.6	0.3
	C40043		50	2,636	3.0				
40043		2,931				5.6 ²	4.9 ³	5.3	0.4
	C40045		57	2,636	1.9				
40045		3,626				6.0 ²	5.6 ³	6.3	0.7
	C40047		106	2,636	1.7				
40047		4,213				6.0 ²	5.9 ³	6.8	0.9
	C40051L1		222	2,637	1.4				
40051L1		4,956				7.2 ²	7.1 ³	8.1	1.0
	C40051		159	2,620	3.5				
40051		5,523				8.1 ²	8.0 ³	8.9	0.9
	C40065		298	2,549	1.3				
40065		6,512				10.8	10.8	11.7	0.9
	C40071		171	2,550	0.9				
40071		7,242				10.9	10.9	11.8	0.9
	C40072		189	2,550	1.8				
40072		7,654				11.2	11.2	12.0	0.8
	C40073		363	2,550	2.0				
40073		8,231				11.8	11.8	12.5	0.7

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above New Kings Road.

²Combined coastal and riverine effects from Atlantic Ocean and Trout River

³Elevation computed without consideration of backwater effects from Atlantic Ocean

*Floodway data not available for "S" Nodes not shown on this table

**Controlled by coastal flooding – see Flood Insurance Rate Map for regulatory base flood elevation

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY DUVAL COUNTY, FLORIDA (ALL JURISDICTIONS)	FLOODWAY DATA
		FLOODING SOURCE: TROUT RIVER

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
40075	C40075	9,121	202	2,551	3.6	12.9	12.9	13.5	0.6
40076L1	C40076L1	10,000	185	2,427	2.5	15.5	15.5	16.4	0.9
40076L2	C40076L2	10,665	131	2,426	2.0	16.1	16.1	17.0	0.9
40076	C40076	11,451	238	2,426	3.1	17.0	17.0	17.7	0.7
40077	C40077	12,173	395	2,426	3.1	17.3	17.3	18.1	0.8
40078L1	C40078L1	13,148	534	2,444	2.5	17.9	17.9	18.5	0.6
40078L2	C40078L2	14,121	74	2,464	1.7	19.0	19.0	20.0	1.0
40078	C40078	15,001	583	2,628	3.1	19.8	19.8	20.4	0.6

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above New Kings Road.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FLORIDA
 (ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: TROUT RIVER

LOCATION			FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD 88)			
NODES*	LINKS	DISTANCE ¹	WIDTH (FEET)	BASE PEAK FLOW (CUBIC FEET/ SEC)	BASE PEAK VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	SURCHARGE
0089		0				59.8	59.8	60.6	0.8
0089L	C0089L	348	30	377	1.4	59.9	59.9	60.7	0.8
0090	C0090	449	47	388	2.1	59.9	59.9	60.8	0.9
0094	C0094	1,049	24	403	5.2	63.4	63.4	63.5	0.1
0096	C0096	1,705	40	414	3.7	64.2	64.2	64.2	0.0
0098	C0098	2,257	43	431	3.7	65.4	65.4	65.4	0.0
0100	C0100	2,729	25	440	4.3	66.6	66.6	66.6	0.0
0104	C0104	3,486	19	134	2.4	68.8	68.8	68.8	0.0
0106	C0106	4,209	48	134	1.5	70.9	70.9	70.9	0.0
0108	C0108	5,006	17	134	2.6	75.6	75.6	75.6	0.0
0110	C0110	692	24	134	2.0	78.0	78.0	78.0	0.0

¹Feet above first node shown in Floodway Data Table. Distance on associated profile is feet above confluence with Yellow Water Creek.

*Floodway data not available for "S" Nodes not shown on this table

TABLE 24

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FLORIDA

(ALL JURISDICTIONS)

FLOODWAY DATA

FLOODING SOURCE: YELLOW WATER CREEK
TRIBUTARY 1

Table 25: Flood Hazard and Non-Encroachment Data for Selected Streams
[Not Applicable to this Flood Risk Project]

6.4 Coastal Flood Hazard Mapping

Flood insurance zones and BFEs including the wave effects were identified on each transect based on the results from the onshore wave hazard analyses. Between transects, elevations were interpolated using topographic maps, land-use and land-cover data, and knowledge of coastal flood processes to determine the aerial extent of flooding. Sources for topographic data are shown in Table 23.

Zone VE is subdivided into elevation zones and BFEs are provided on the FIRM.

The limit of Zone VE shown on the FIRM is defined as the farthest inland extent of any of these criteria (determined for the 1% annual chance flood condition):

- The *primary frontal dune zone* is defined in 44 CFR Section 59.1 of the NFIP regulations. The primary frontal dune represents a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes that occur immediately landward and adjacent to the beach. The primary frontal dune zone is subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune zone occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.
- The *wave runup zone* occurs where the (eroded) ground profile is 3.0 feet or more below the 2-percent wave runup elevation.
- The *wave overtopping splash zone* is the area landward of the crest of an overtopped barrier, in cases where the potential 2-percent wave runup exceeds the barrier crest elevation by 3.0 feet or more.
- The *breaking wave height zone* occurs where 3-foot or greater wave heights could occur (this is the area where the wave crest profile is 2.1 feet or more above the total stillwater elevation).
- The *high-velocity flow zone* is landward of the overtopping splash zone (or area on a sloping beach or other shore type), where the product of depth of flow times the flow velocity squared (hv^2) is greater than or equal to $200 \text{ ft}^3/\text{sec}^2$. This zone may only be used on the Pacific Coast.

The SFHA boundary indicates the limit of SFHAs shown on the FIRM as either “V” zones or “A” zones.

Table 26 indicates the coastal analyses used for floodplain mapping and the criteria used to determine the inland limit of the open-coast Zone VE and the SFHA boundary at each transect.

Table 26: Summary of Coastal Transect Mapping Considerations

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
1 ¹	1	1	AE 6-7	1	1
2 ¹	1	1	AE 6-7	1	1
3 ¹	1	1	VE 10 AE 6, 8-9	1	1
4 ¹	1	1	VE 10-11 AE 8-9	1	1
5 ¹	1	1	VE 9-11 AE 7-9	1	1
6 ¹	1	1	VE 12	1	1
7 ¹	1	1	VE 10, 12, 14 AE 8-10	1	1
8 ²			VE 9-12 AE 7-10	Wave Height	SWEL
9 ²			VE 9-10, 13 AE 7-10	Wave Height	SWEL
10 ²			VE 9-10, 13 AE 7-9	Wave Height	SWEL
11	✓		VE 9, 11, 13 AE 7-11	PFD	PFD
12	✓		VE 9, 11, 13 AE 6-10	PFD	SWEL
13	✓		VE 9, 11, 13 AE 6-9	PFD	SWEL
14	✓		VE 9, 11, 13 AE 6-10	PFD	SWEL
15	✓		VE 7-9, 11, 13-14 AE 5-10	PFD	SWEL
16	✓	VE 11	VE 7-9, 11, 13 AE 5-10	PFD	SWEL
17 ²			VE 7, 9-11 AE 5-9	Wave Height	SWEL

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
18	✓	VE 12 AO 2	VE 7, 9-10, 12-13 AE 5-9	Erosion/ Runup	Overtopping
19	✓	VE 12	VE 7, 9-10, 12- 13 AE 5-9	Erosion/ Runup	Overtopping
20	✓		VE 9, 12-13 AE 6-9	PFD	SWEL
21	✓	VE 12 AE 12	VE 9, 12-13 AE 5-9, 12	Erosion/ Runup	Erosion/ Runup
22	✓	VE 12 AE 12	VE 9, 12-13 AE 6-8	Erosion/ Runup	Erosion/ Runup
23	✓		VE 9, 11, 12-13 AE 6-9	PFD	SWEL
24	✓	VE 12	VE 9, 12-13 AE 6-8	Erosion/ Runup	Erosion/ Runup
25	✓	VE 12	VE 9, 12-13 AE 6-8	Erosion/ Runup	Erosion/ Runup
26	✓	VE 12	VE 9, 12-13 AE 6-8	Erosion/ Runup	Erosion/ Runup
27	✓	VE 11	VE 8, 11, 13 AE 6-7	Erosion /Runup	Erosion/ Runup
28	✓	VE 11	VE 8, 11, 13 AE 6-7	Erosion/ Runup	Erosion/ Runup
29	✓	VE 12	VE 8, 12-13 AE 6-7	Erosion /Runup	Erosion/ Runup
30	✓	VE 13	VE 8, 13 AE 6-7, 9	Erosion/ Runup	Erosion/ Runup
31	✓	VE 16 AO 1	VE 8, 13, 16 AE 6-7, 9	Overtopping Splash Zone	Overtopping
32	✓	VE 11 AO 1	VE 8, 11, 13 AE 6-7, 9	Erosion/ Runup	Overtopping

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
33	✓	VE 14 AO 1	VE 7, 13-14 AE 5-7, 9	Erosion/ Runup	SWEL
34	✓	VE 13 AO 2	VE 7, 13 AE 5-7, 9	Overtopping Splash Zone	SWEL
35	✓	VE 11 AO 1	VE 7, 11, 13 AE 5-7, 9	Erosion/ Runup	Overtopping
36	✓	VE 15 AO 1	VE 7, 13, 15 AE 5-7, 9	Overtopping Splash Zone	SWEL
37	✓	VE 15 AE 15	VE 13, 15 AE 5-7, 9, 15	Erosion/ Runup	Erosion/ Runup
38	✓	VE 12	VE 12-13	Erosion/ Runup	Erosion/ Runup
39 ²			VE 8-10 AE 6-8	Wave Height	SWEL
40 ²			VE 10 AE 7-8	Wave Height	SWEL
41 ²			VE 9 AE 7-8	Wave Height	SWEL
42 ²			VE 9 AE 6-8	Wave Height	SWEL
43 ²			VE 9 AE 6-8	Wave Height	SWEL
44 ²			VE 9 AE 6-8	Wave Height	SWEL
45 ²			VE 8 AE 5-7	Wave Height	SWEL
46 ²			VE 8 AE 6-7	Wave Height	SWEL
47 ²			AE 5-7	Wave Height	SWEL
48 ²			AE 5-7	Wave Height	SWEL
49 ²			AE 5-7	Wave Height	SWEL
50 ²			VE 9 AE 6-7	Wave Height	SWEL

Table 26: Summary of Coastal Transect Mapping Considerations, continued

Coastal Transect	Primary Frontal Dune (PFD) Identified	Wave Runup Analysis	Wave Height Analysis	Zone VE Limit	SFHA Boundary
		Zone Designation and BFE (ft NAVD88)	Zone Designation and BFE (ft NAVD88)		
51 ²			VE 9	Wave Height	SWEL
52 ²			VE 9 AE 5	Wave Height	SWEL
53 ²			VE 7 AE 5-7	Wave Height	SWEL
54 ²			VE 7 AE 5-6	Wave Height	SWEL
55 ²			AE 5, 7	Wave Height	SWEL
56 ²			VE 7 AE 5	Wave Height	SWEL
57 ²			VE 7 AE 5	Wave Height	SWEL
58 ²			AE 4-5, 7	Wave Height	SWEL
59 ²			AE 6	Wave Height	SWEL
60 ²			AE 4-6	Wave Height	SWEL
61 ²			AE 4, 6	Wave Height	SWEL
62 ²			AE 4-6	Wave Height	SWEL
63 ²			AE 6	Wave Height	SWEL
64 ²			AE 4, 6	Wave Height	SWEL
65 ²			AE 4-6	Wave Height	SWEL
66 ²			AE 4-6	Wave Height	SWEL
67 ²			AE 6	Wave Height	SWEL
68 ²			AE 4,6	Wave Height	SWEL

¹Transect originates in Nassau County, Florida. See Nassau County FIS report (Federal Emergency Management Agency, 2016).

²Transect originates inland, not on open coast

A LiMWA boundary has also been added in coastal areas subject to wave action for use by local communities in safe rebuilding practices. The LiMWA represents the approximate landward limit of the 1.5-foot breaking wave.

6.5 FIRM Revisions

This FIS Report and the FIRM are based on the most up-to-date information available to FEMA at the time of its publication; however, flood hazard conditions change over time. Communities or private parties may request flood map revisions at any time. Certain types of requests require submission of supporting data. FEMA may also initiate a revision. Revisions may take several forms, including Letters of Map Amendment (LOMAs), Letters of Map Revision Based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs) (referred to collectively as Letters of Map Change (LOMCs)), Physical Map Revisions (PMRs), and FEMA-contracted restudies. These types of revisions are further described below. Some of these types of revisions do not result in the republishing of the FIS Report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood-hazard data (shown in Table 31, “Map Repositories”).

6.5.1 Letters of Map Amendment

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative process that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in a SFHA. A LOMA cannot be issued for properties located on the PFD (primary frontal dune).

To obtain an application for a LOMA, visit www.fema.gov/floodplain-management/letter-map-amendment-loba and download the form “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill”. Visit the “Flood Map-Related Fees” section to determine the cost, if any, of applying for a LOMA.

FEMA offers a tutorial on how to apply for a LOMA. The LOMA Tutorial Series can be accessed at www.fema.gov/online-tutorials.

For more information about how to apply for a LOMA, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627).

6.5.2 Letters of Map Revision Based on Fill

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA’s determination concerning whether a structure or parcel has been elevated on fill above the base flood elevation and is, therefore, excluded from the SFHA.

Information about obtaining an application for a LOMR-F can be obtained in the same manner as that for a LOMA, by visiting www.fema.gov/floodplain-management/letter-map-amendment-loba for the “MT-1 Application Forms and Instructions for Conditional and Final Letters of Map Amendment and Letters of Map Revision Based on Fill” or by calling the FEMA Map Information eXchange, toll free, at 1-877-FEMA MAP (1-877-336-2627). Fees for applying for a LOMR-F, if any, are listed in the “Flood Map-Related Fees” section.

A tutorial for LOMR-F is available at www.fema.gov/online-tutorials.

6.5.3 Letters of Map Revision

A LOMR is an official revision to the currently effective FEMA map. It is used to change flood zones, floodplain and floodway delineations, flood elevations and planimetric features. All requests for LOMRs should be made to FEMA through the chief executive officer of the community, since it is the community that must adopt any changes and revisions to the map. If the request for a LOMR is not submitted through the chief executive officer of the community, evidence must be submitted that the community has been notified of the request.

To obtain an application for a LOMR, visit www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/mt-2-application-forms-and-instructions and download the form “MT-2 Application Forms and Instructions for Conditional Letters of Map Revision and Letters of Map Revision”. Visit the “Flood Map-Related Fees” section to determine the cost of applying for a LOMR. For more information about how to apply for a LOMR, call the FEMA Map Information eXchange; toll free, at 1-877-FEMA MAP (1-877-336-2627) to speak to a Map Specialist.

Previously issued mappable LOMCs (including LOMRs) that have been incorporated into the Duval County FIRM are listed in Table 27. Please note that this table only includes LOMCs that have been issued on the FIRM panels updated by this map revision. For all other areas within this county, users should be aware that revisions to the FIS Report made by prior LOMRs may not be reflected herein and users will need to continue to use the previously issued LOMRs to obtain the most current data.

Table 27: Incorporated Letters of Map Change

Case Number	Effective Date	Flooding Source	FIRM Panel(s)
12-04-6121P	07-08-2013	Pond 1, Pond 2, Pond 3, Pond 4, Pond 5, Pond 6, Pond 7, Pond 8, Pond 9, Pond 10, Wetland 1, Wetland 2, Wetland 3, Wetland 4, and Wetland 5	12031C0160J 12031C0178J
14-04-1465P	12-11-2014	Open Creek Tributary 4, and Unnamed Ponding Area	12031C0411J
14-04-2078P	10-27-2014	Mount Pleasant Creek Tributary 6 and Unnamed Wetland Area	12031C0401J 12031C0403J
14-04-5730P	12-26-2014	Cedar Swamp Creek	12031C0411J
15-04-5977P	02-23-2016	Open Creek Headwaters Ponding Area 1	12031C0411J 12031C0412J

6.5.4 Physical Map Revisions

Physical Map Revisions (PMRs) are an official republication of a community’s NFIP map to effect changes to base flood elevations, floodplain boundary delineations, regulatory floodways and planimetric features. These changes typically occur as a result of structural works or

improvements, annexations resulting in additional flood hazard areas or correction to base flood elevations or SFHAs.

The community's chief executive officer must submit scientific and technical data to FEMA to support the request for a PMR. The data will be analyzed and the map will be revised if warranted. The community is provided with copies of the revised information and is afforded a review period. When the base flood elevations are changed, a 90-day appeal period is provided. A 6-month adoption period for formal approval of the revised map(s) is also provided.

For more information about the PMR process, please visit www.fema.gov and visit the "Flood Map Revision Processes" section.

6.5.5 Contracted Restudies

The NFIP provides for a periodic review and restudy of flood hazards within a given community. FEMA accomplishes this through a national watershed-based mapping needs assessment strategy, known as the Coordinated Needs Management Strategy (CNMS). The CNMS is used by FEMA to assign priorities and allocate funding for new flood hazard analyses used to update the FIS Report and FIRM. The goal of CNMS is to define the validity of the engineering study data within a mapped inventory. The CNMS is used to track the assessment process, document engineering gaps and their resolution, and aid in prioritization for using flood risk as a key factor for areas identified for flood map updates. Visit www.fema.gov to learn more about the CNMS or contact the FEMA Regional Office listed in Section 8 of this FIS Report.

6.5.6 Community Map History

The current FIRM presents flooding information for the entire geographic area of Duval County. Previously, separate FIRMs, Flood Hazard Boundary Maps (FHBM) and/or Flood Boundary and Floodway Maps (FBFM) may have been prepared for the incorporated communities and the unincorporated areas in the county that had identified SFHAs. Current and historical data relating to the maps prepared for the project area are presented in Table 28, "Community Map History." A description of each of the column headings and the source of the date is also listed below.

- *Community Name* includes communities falling within the geographic area shown on the FIRM, including those that fall on the boundary line, nonparticipating communities, and communities with maps that have been rescinded. Communities with No Special Flood Hazards are indicated by a footnote. If all maps (FHBM, FBFM, and FIRM) were rescinded for a community, it is not listed in this table unless SFHAs have been identified in this community.
- *Initial Identification Date (First NFIP Map Published)* is the date of the first NFIP map that identified flood hazards in the community. If the FHBM has been converted to a FIRM, the initial FHBM date is shown. If the community has never been mapped, the upcoming effective date or "pending" (for Preliminary FIS Reports) is shown. If the community is listed in Table 28 but not identified on the map, the community is treated as if it were unmapped.
- *Initial FHBM Effective Date* is the effective date of the first Flood Hazard Boundary Map (FHBM). This date may be the same date as the Initial NFIP Map Date.
- *FHBM Revision Date(s)* is the date(s) that the FHBM was revised, if applicable.

- *Initial FIRM Effective Date* is the date of the first effective FIRM for the community.
- *FIRM Revision Date(s)* is the date(s) the FIRM was revised, if applicable. This is the revised date that is shown on the FIRM panel, if applicable. As countywide studies are completed or revised, each community listed should have its FIRM dates updated accordingly to reflect the date of the countywide study. Once the FIRMs exist in countywide format, as Physical Map Revisions (PMR) of FIRM panels within the county are completed, the FIRM Revision Dates in the table for each community affected by the PMR are updated with the date of the PMR, even if the PMR did not revise all the panels within that community.

The initial effective date for the Duval County FIRMs in countywide format was 06/03/2013.

Table 28: Community Map History

Community Name	Initial Identification Date	Initial FHBM Effective Date	FHBM Revision Date(s)	Initial FIRM Effective Date	FIRM Revision Date(s)
Atlantic Beach, City of	06/28/1974	06/28/1974	06/11/1976	03/15/1977	06/03/2013 04/17/1989 04/18/1983
Baldwin, Town of ¹	N/A	N/A	None	N/A	None
Jacksonville, City of	01/31/1975	01/31/1975	08/20/1976	12/01/1977	06/03/2013 06/16/1999 04/15/1992 08/15/1989 12/15/1983 10/01/1983
Jacksonville Beach, City of	06/07/1984	06/07/1984	02/06/1976	03/15/1977	06/03/2013 04/17/1989 04/18/1983
Neptune Beach, City of	05/31/1974	05/31/1974	03/26/1976	03/15/1977	06/03/2013 04/17/1989 04/18/1983

¹ No Special Flood Hazard Areas Identified

SECTION 7.0 – CONTRACTED STUDIES AND COMMUNITY COORDINATION

7.1 Contracted Studies

Table 29 provides a summary of the contracted studies, by flooding source, that are included in this FIS Report.

Table 29: Summary of Contracted Studies Included in this FIS Report

Flooding Source	FIS Report Dated	Contractor	Number	Work Completed Date	Affected Communities
Atlantic Ocean	<date>	BakerAECOM	HSFEHQ-09-D-0368	November 2015	Atlantic Beach, City of; Jacksonville, City of; Jacksonville Beach, City of; Neptune Beach, City of
All Combined Probability Analysis Flooding Sources	<date>	BakerAECOM	HSFEHQ-09-D-0368	November 2015	Atlantic Beach, City of; Jacksonville, City of; Jacksonville Beach, City of; Neptune Beach, City of
Thomas Creek	N/A	Engineering Methods and Applicants, Inc.	EMW-84-C-1610	September 1987	Jacksonville, City of
All Remaining Flooding Sources	06/03/2013	CDM Smith	EMA-2006-CA-5645	November 2009	Atlantic Beach, City of; Jacksonville, City of; Jacksonville Beach, City of; Neptune Beach, City of

7.2 Community Meetings

The dates of the community meetings held for this Flood Risk Project and previous Flood Risk Projects are shown in Table 30. These meetings may have previously been referred to by a variety of names (Community Coordination Officer (CCO), Scoping, Discovery, etc.), but all meetings represent opportunities for FEMA, community officials, study contractors, and other invited guests to discuss the planning for and results of the project.

Table 30: Community Meetings

Community	FIS Report Dated	Date of Meeting	Meeting Type	Attended By
Atlantic Beach, City of	*	04/24/1984	Initial CCO	*
		06/09/1988	Final CCO	*
Duval County, All Jurisdictions	<date>	03/2011	Discovery	*
	06/03/2013	05/03/2007	Initial CCO	FEMA, City of Atlantic Beach, City of Jacksonville, City of Neptune Beach, USACE, Saint Johns River Water Management District, CDM Smith, and community members
		05/11/2010	Final CCO	FEMA, City of Atlantic Beach, City of Jacksonville, and the City of Jacksonville Beach
Jacksonville, City of	*	04/24/1984	Initial CCO	*
		06/08/1988	Final CCO	*
Jacksonville Beach, City of	*	04/24/1984	Initial CCO	*
		06/10/1988	Final CCO	*
Neptune Beach, City of	*	04/24/1984	Initial CCO	*
		06/09/1988	Final CCO	*

*Data not available

SECTION 8.0 – ADDITIONAL INFORMATION

Information concerning the pertinent data used in the preparation of this FIS Report can be obtained by submitting an order with any required payment to the FEMA Engineering Library. For more information on this process, see www.fema.gov.

Table 31 is a list of the locations where FIRMs for Duval County can be viewed. Please note that the maps at these locations are for reference only and are not for distribution. Also, please note that only the maps for the community listed in the table are available at that particular repository. A user may need to visit another repository to view maps from an adjacent community.

Table 31: Map Repositories

Community	Address	City	State	Zip Code
Atlantic Beach, City of	City Hall 800 Seminole Road	Atlantic Beach	FL	32233
Baldwin, Town of ¹	Town Hall 10 U.S. Highway 90 West	Baldwin	FL	32234
Jacksonville, City of	City Hall 117 West Duval Street	Jacksonville	FL	32202
Jacksonville Beach, City of	City Hall 11 North Third Street	Jacksonville Beach	FL	32250
Neptune Beach, City of	City Hall 116 First Street	Neptune Beach	FL	32266

¹ No Special Flood Hazard Areas Identified

The National Flood Hazard Layer (NFHL) dataset is a compilation of effective FIRM databases and LOMCs. Together they create a GIS data layer for a State or Territory. The NFHL is updated as studies become effective and extracts are made available to the public monthly. NFHL data can be viewed or ordered from the website shown in Table 32.

Table 32 contains useful contact information regarding the FIS Report, the FIRM, and other relevant flood hazard and GIS data. In addition, information about the State NFIP Coordinator and GIS Coordinator is shown in this table. At the request of FEMA, each Governor has designated an agency of State or territorial government to coordinate that State's or territory's NFIP activities. These agencies often assist communities in developing and adopting necessary floodplain management measures. State GIS Coordinators are knowledgeable about the availability and location of State and local GIS data in their state.

Table 32: Additional Information

FEMA and the NFIP	
FEMA and FEMA Engineering Library website	www.fema.gov/national-flood-insurance-program-flood-hazard-mapping/engineering-library
NFIP website	www.fema.gov/national-flood-insurance-program

Table 32: Additional Information, continued

FEMA and the NFIP	
NFHL Dataset	msc.fema.gov
FEMA Region IV	FEMA-R4 (Hollins Building), 3003 Chamblee-Tucker Road, Atlanta, GA 30341 (770) 220-3174
Other Federal Agencies	
USGS website	www.usgs.gov
Hydraulic Engineering Center website	www.hec.usace.army.mil
State Agencies and Organizations	
State NFIP Coordinator	Steve Martin, CFM, State Floodplain Manager Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 - 2100 850-922-5269 steve.martin@em.myflorida.com
State GIS Coordinator	Richard Butgereit, GIS Administrator Florida Division of Emergency Management 2555 Shumard Oak Boulevard Tallahassee, FL 32399 - 2100 Phone: 850-413-9907 richard.butgereit@em.myflorida.com

SECTION 9.0 – BIBLIOGRAPHY AND REFERENCES

Table 33 includes sources used in the preparation of and cited in this FIS Report as well as additional studies that have been conducted in the study area.

Table 33: Bibliography and References

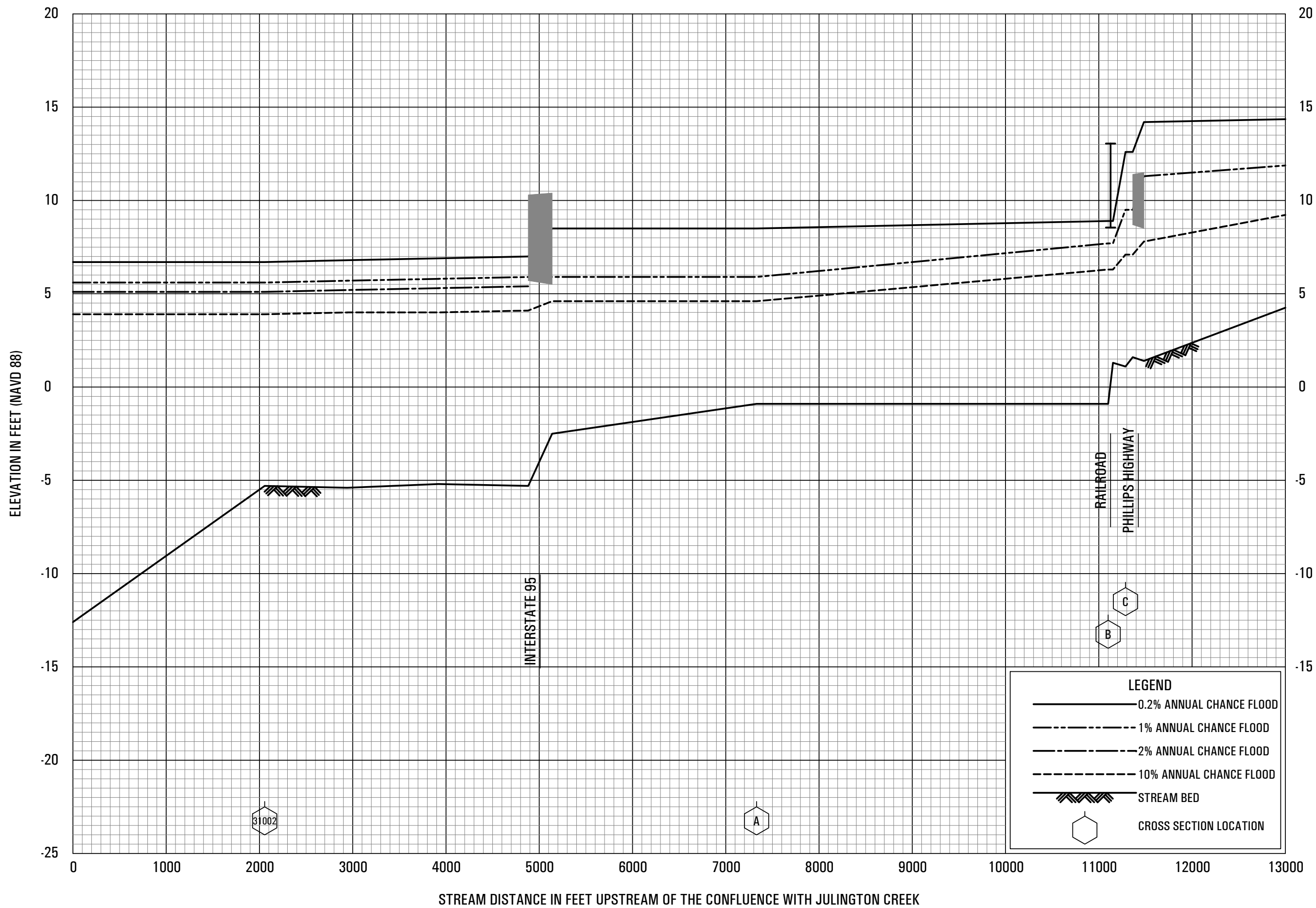
Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
2007 FDEM LiDAR: Duval County	Florida Division of Emergency Management	<i>"Florida DEM"</i>			2007	
Delft University of Technology	Delft University of Technology, the Netherlands	<i>SWAN User Manual, SWAN Cycle III version 40.51</i>	SWAN Team, Delft University of Technology, the Netherlands		2006	
EPA, 2008-2009	Environmental Protection Agency	<i>Stormwater Management Model (EPA SWMM5) versions 12, February 2008; 13, March 2008; and 14, January 2009</i>			Various	
Federal Emergency Management Agency, 2016	Federal Emergency Management Agency,	<i>Flood Insurance Study, Nassau County, Florida (Unincorporated Areas)</i>			2016	http://www.fema.gov
Federal Emergency Management Agency, 2008	Federal Emergency Management Agency	<i>Tide Gage Analysis for the Atlantic and Gulf Open Coast</i>			December 2008	
FEMA, 2007	Federal Emergency Management Agency	<i>Procedure memorandum No. 47 – Guidance for the Determination of the 0.2-Percent-Annual-chance Wave Envelope along the Atlantic Ocean and Gulf of Mexico Coasts</i>			September, 2007	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/ Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/ Date of Issuance	Link
Florida Department of Transportation, 1984	Florida Department of Transportation	<i>Duval County Aerial Photographs (stereo pairs)</i>			1984	
Luetlich, R.A. and J.J. Westerink		<i>Formulation and Numerical Implementation of the 2D/3D ADCIRC Finite Element Model</i>	Luetlich, R.A. and J.J. Westerink		2004	http://www.adcirc.org
Resio, 2007		<i>White Paper on Estimating Hurricane Inundation Probabilities (with contributions from S.J. Boc, L. Borgman, V. Cardone, A. Cox, W.R. Dally, R.G. Dean, D. Divoky, E. Hirsh, J.L. Irish, D. Levinson, A. Niedoroda, M.D. Powell, J.J. Ratcliff, C. Stutts, J. Suhada, G.R. Toro, and P.J. Vickery). Appendix 8-2 (R2007) of USACE (2007), Interagency Performance Evaluation Taskforce (IPET) Final Report.</i>	Resio, D.T.		2007	
Toro, 2010		"Efficient Joint Probability Methods for Hurricane Surge Frequency Analysis," <i>Ocean Engineering</i> , Vol. 37, pp. 125-134.	Toro, G., D.T. Resio, D. Divoky, A.W. Niedoroda, C.W. Reed		2010	

Table 33: Bibliography and References, continued

Citation in this FIS	Publisher/Issuer	Publication Title, "Article," Volume, Number, etc.	Author/Editor	Place of Publication	Publication Date/Date of Issuance	Link
USACE, 1984	U.S. Army Corps of Engineers, Hydrologic Engineering Center	<i>HEC-2 Water Surface Profiles, Computer Program 723-X6-L202A</i>		Davis, California	April, 1984	
USGS, 1982	U.S. Geological Survey	<i>Water Resources Investigations Report 82-4012, Techniques for Estimating Magnitude and Frequency of Floods on Natural Flow Streams in Florida</i>			1982	
USGS, various	U.S. Geological Survey	<i>7.5 Minute Series Topographic Maps, Scale 1:24,000, Contour Interval 10 Feet: Trout River and Jacksonville Beach, Florida, 1964, photorevised 1981; Eastport and Mayport, Florida, 1964, photorevised 1970; Arlington, Florida, 1963, photorevised 1970; Fiftone, Florida, 1949, photorevised 1970; Jacksonville Heights, Florida, 1964, photorevised 1978</i>			Various	



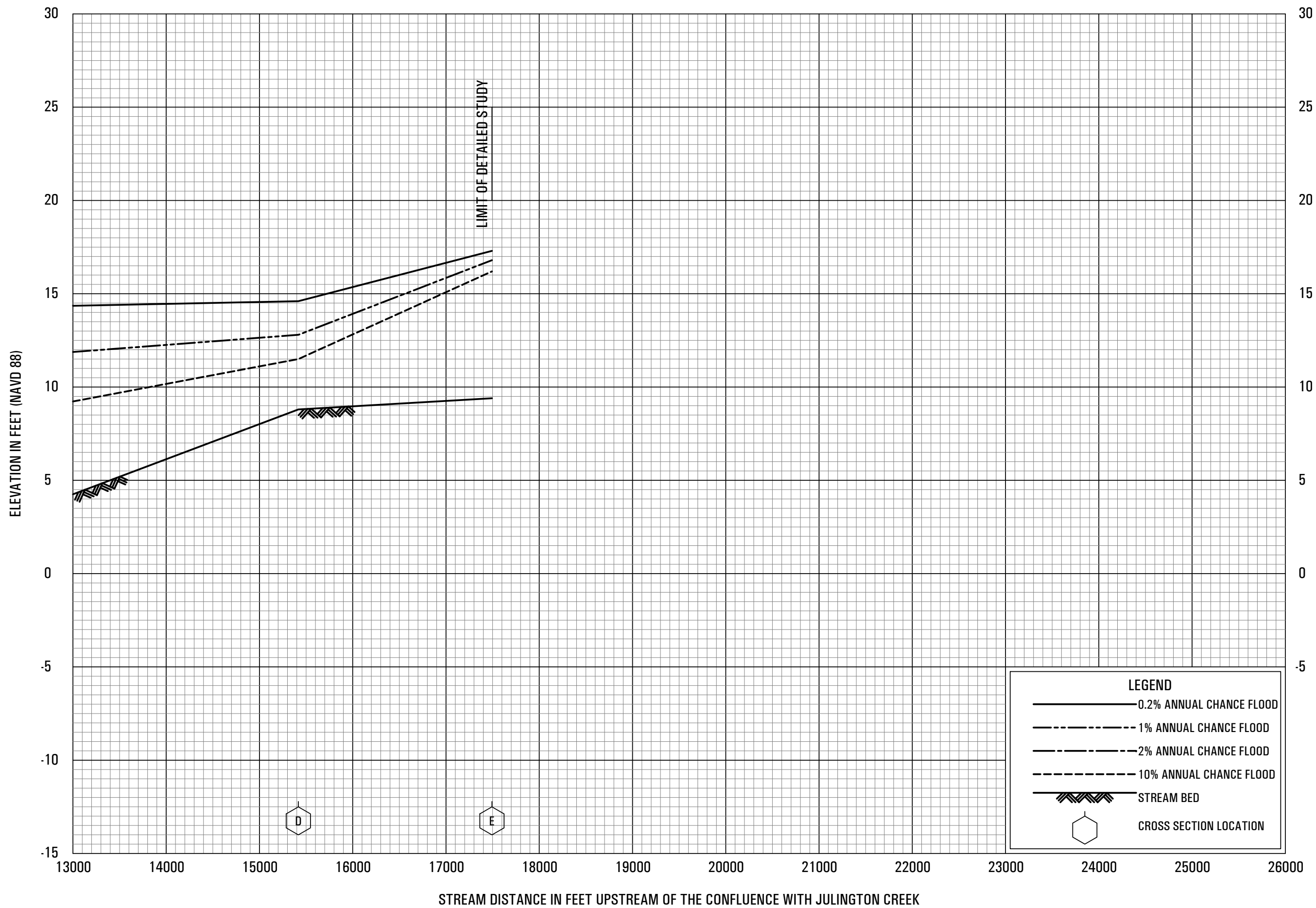
FLOOD PROFILES

BIG DAVIS CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FL
(ALL JURISDICTIONS)

01P



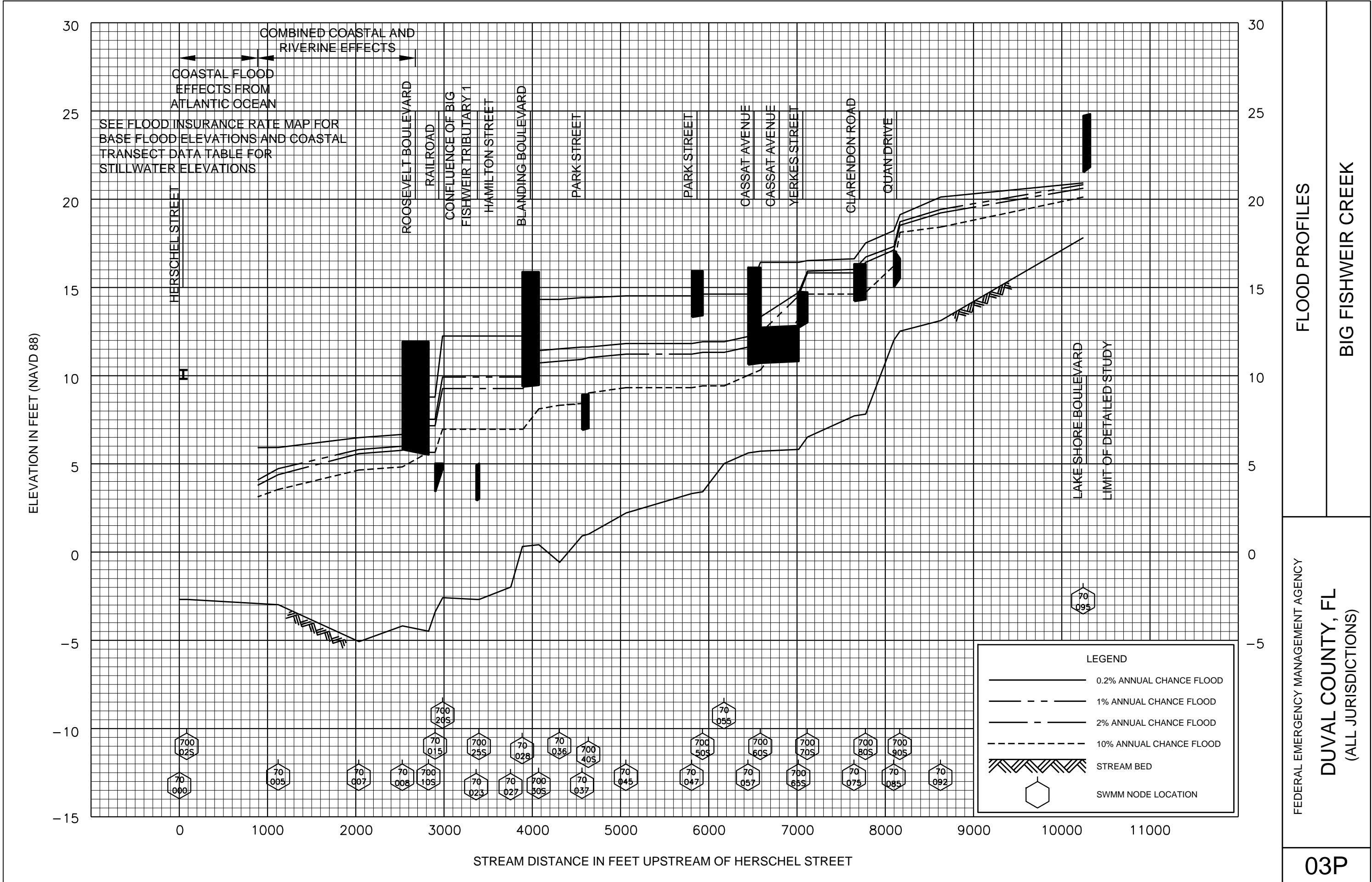
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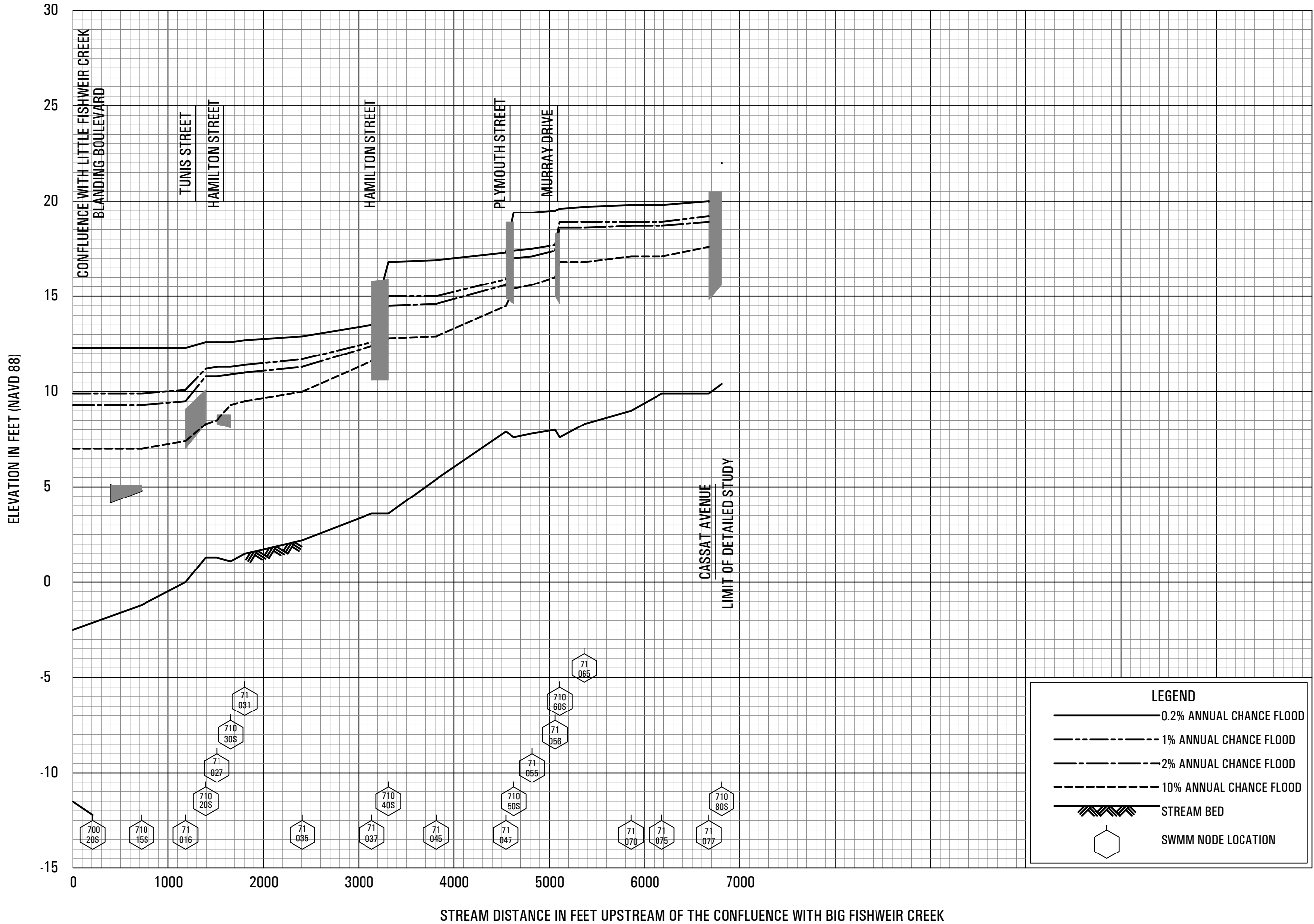
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FEDERAL EMERGENCY MANAGEMENT AGENCY

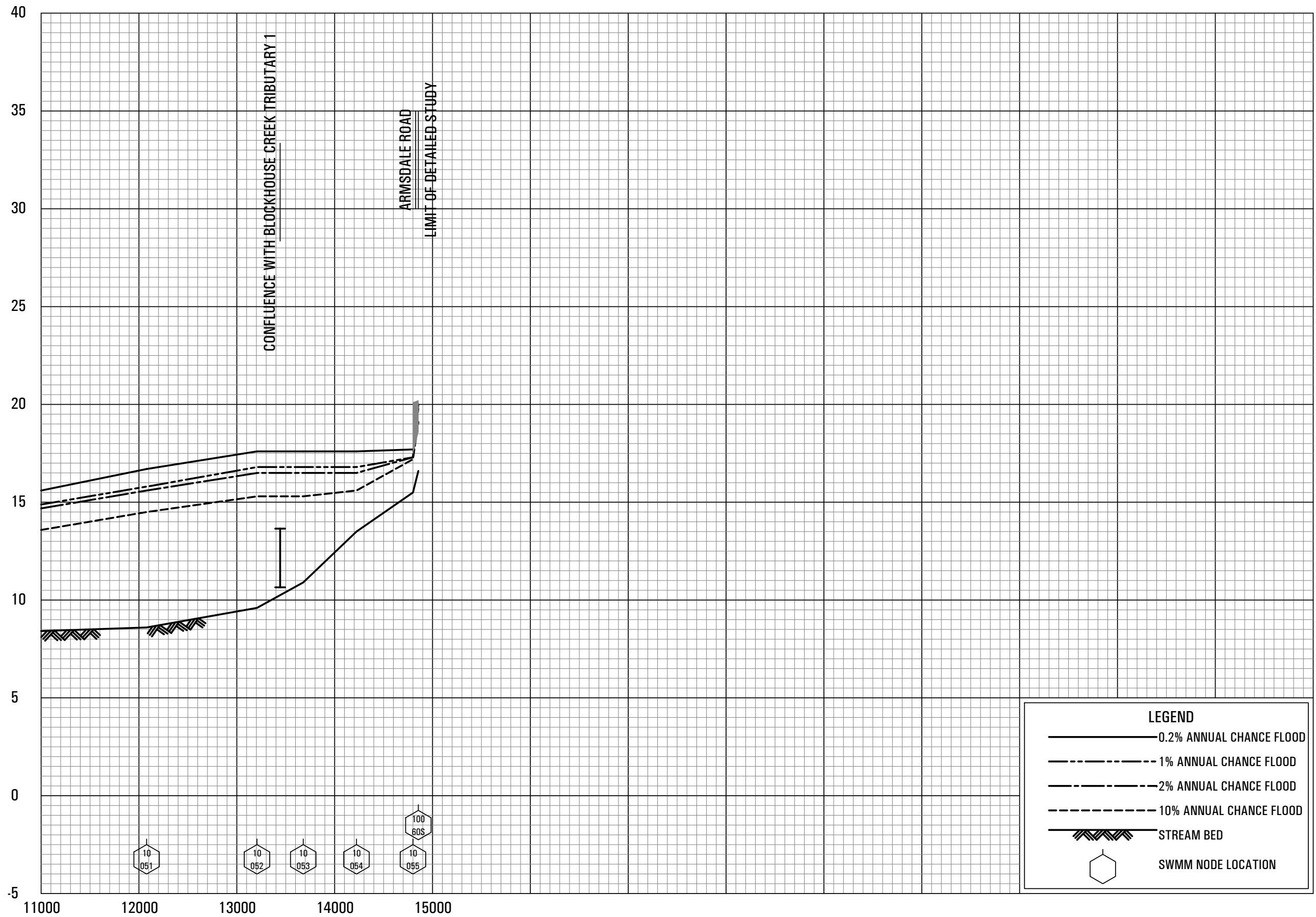
DUVAL COUNTY, FL
(ALL JURISDICTIONS)

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ELEVATION IN FEET (NAVD 88)



STREAM DISTANCE IN FEET UPSTREAM OF CONFLUENCE WITH TROUT RIVER

FLOOD PROFILES

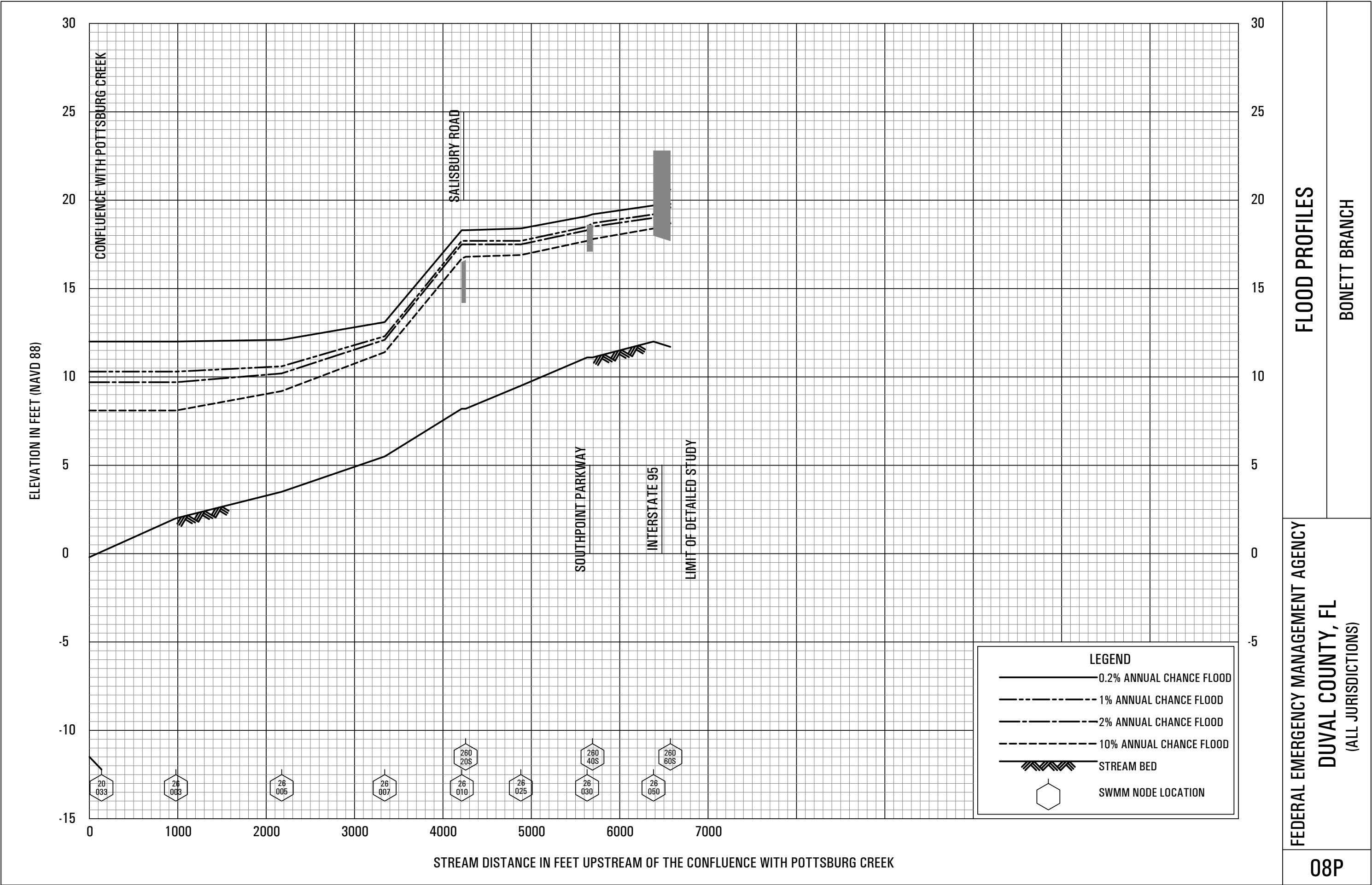
BLOCKHOUSE CREEK

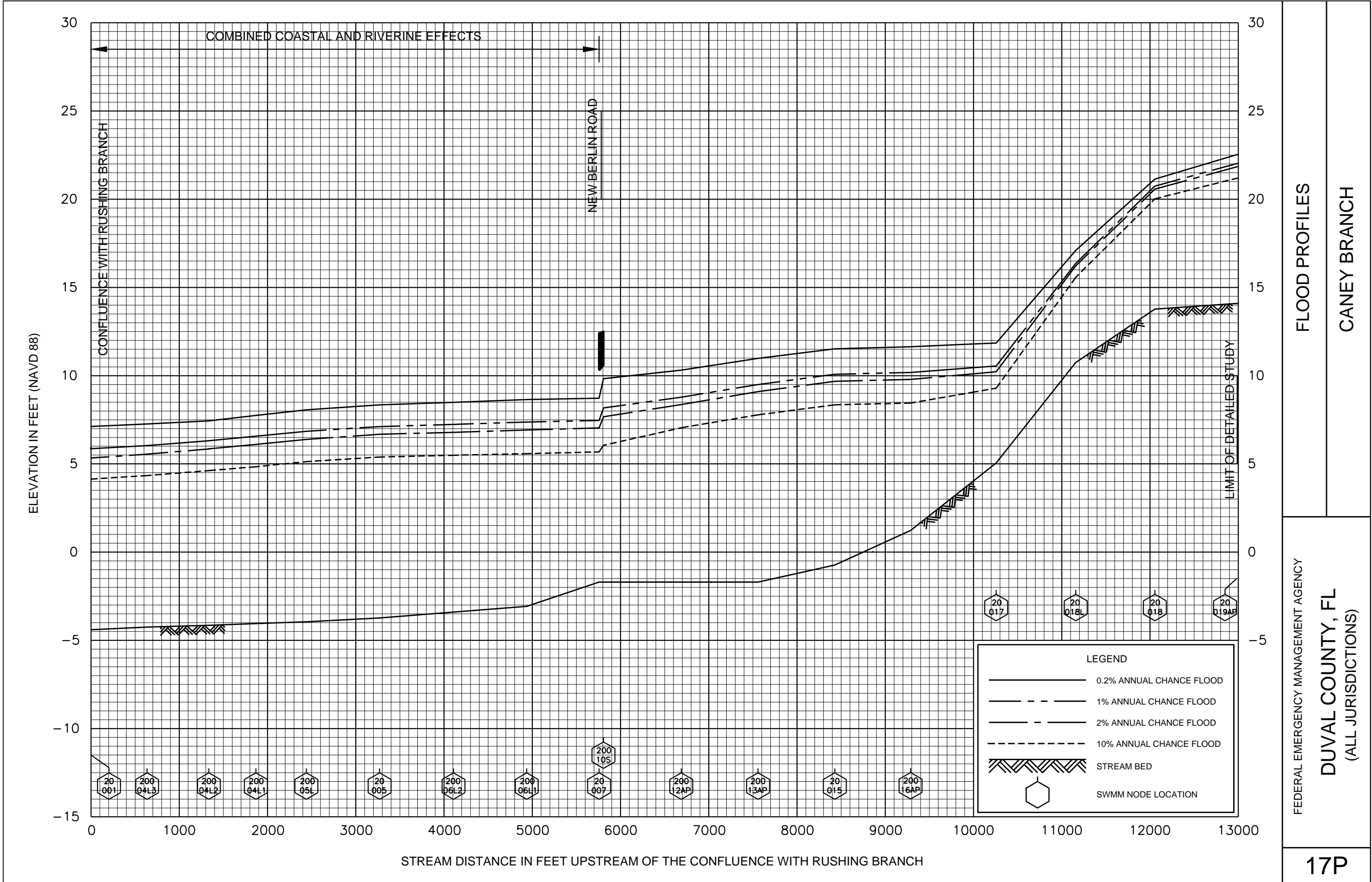
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DUVAL COUNTY, FL

(ALL JURISDICTIONS)

07P



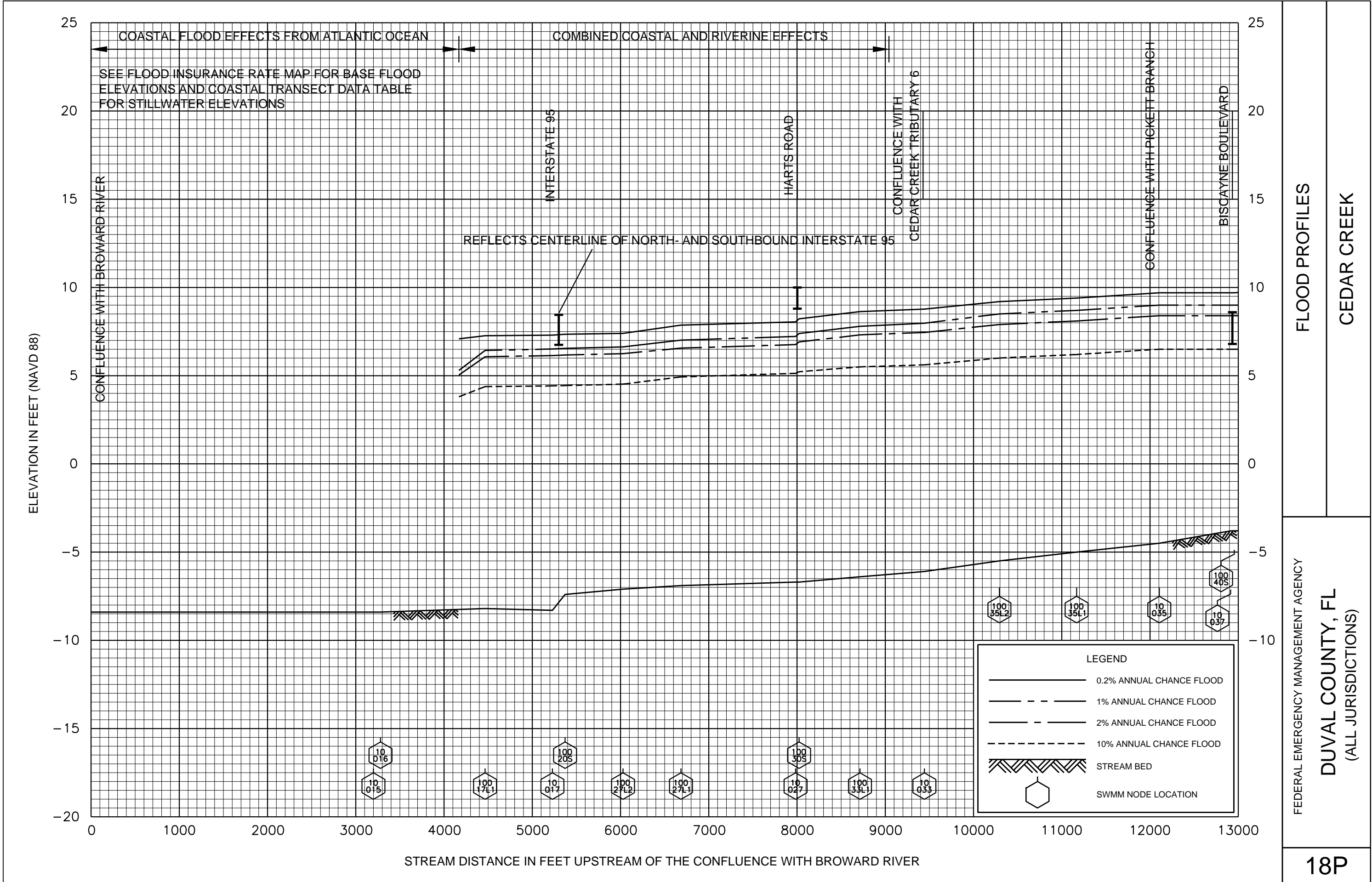


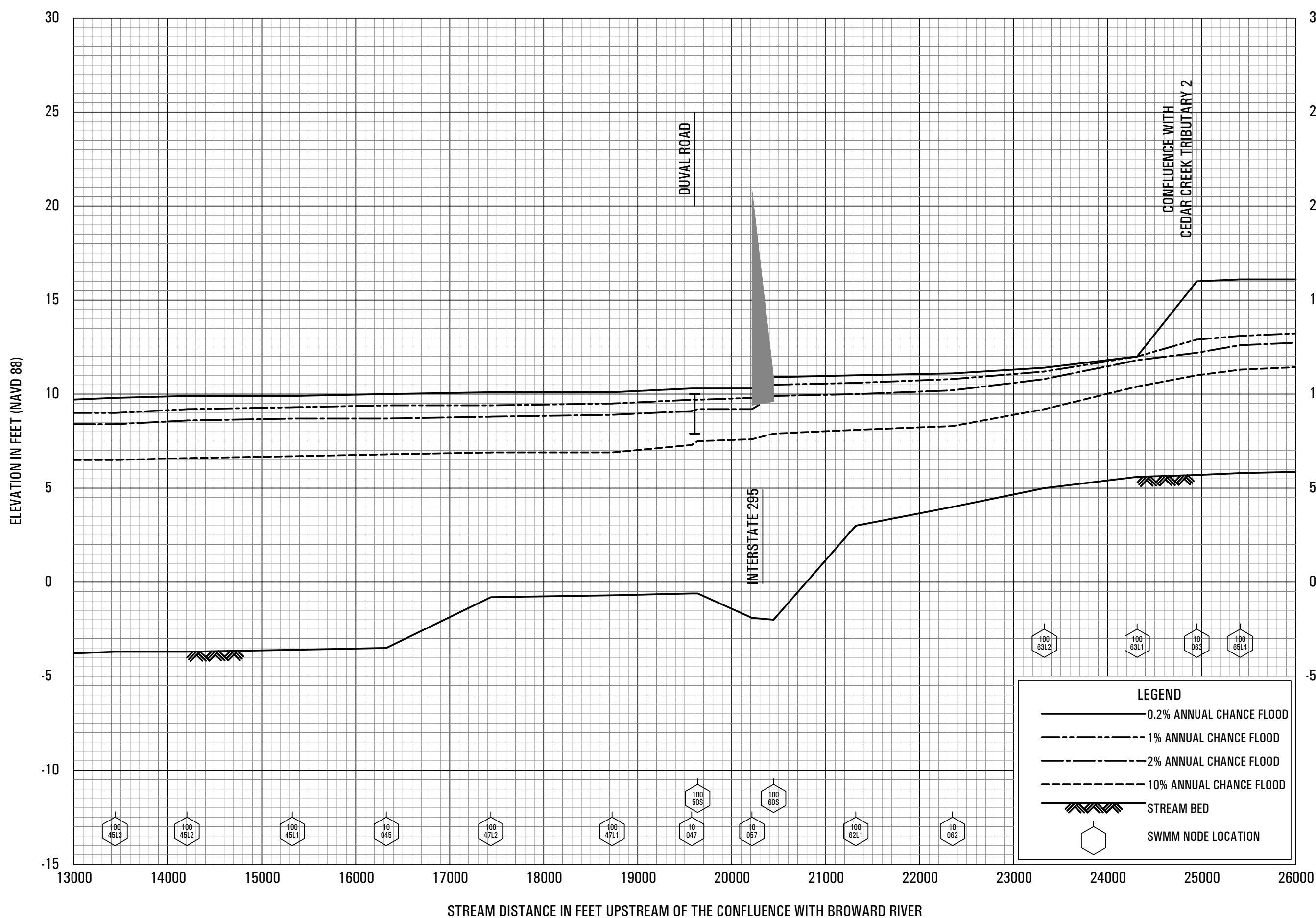
FLOOD PROFILES

CANEY BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FL
(ALL JURISDICTIONS)



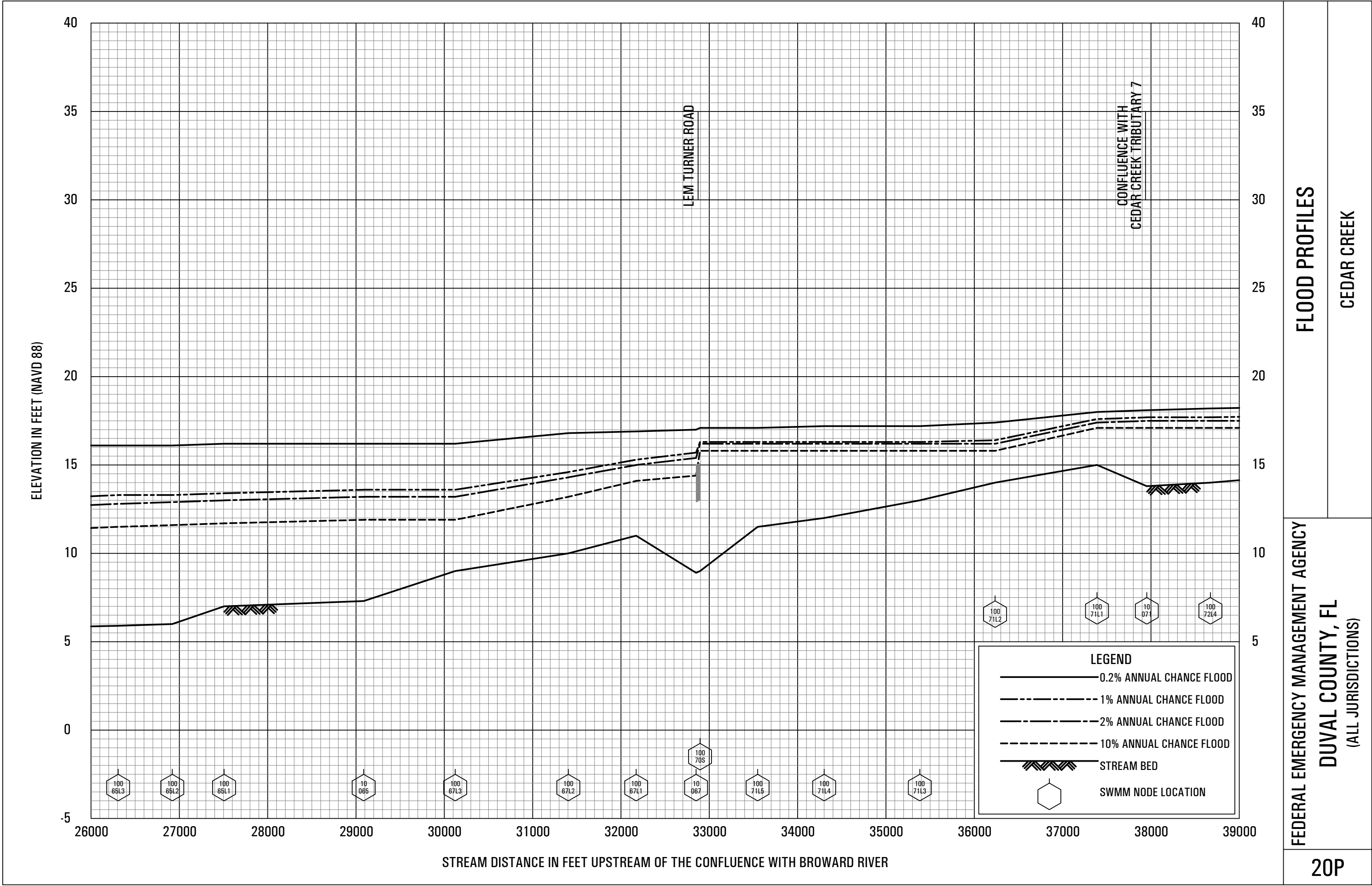


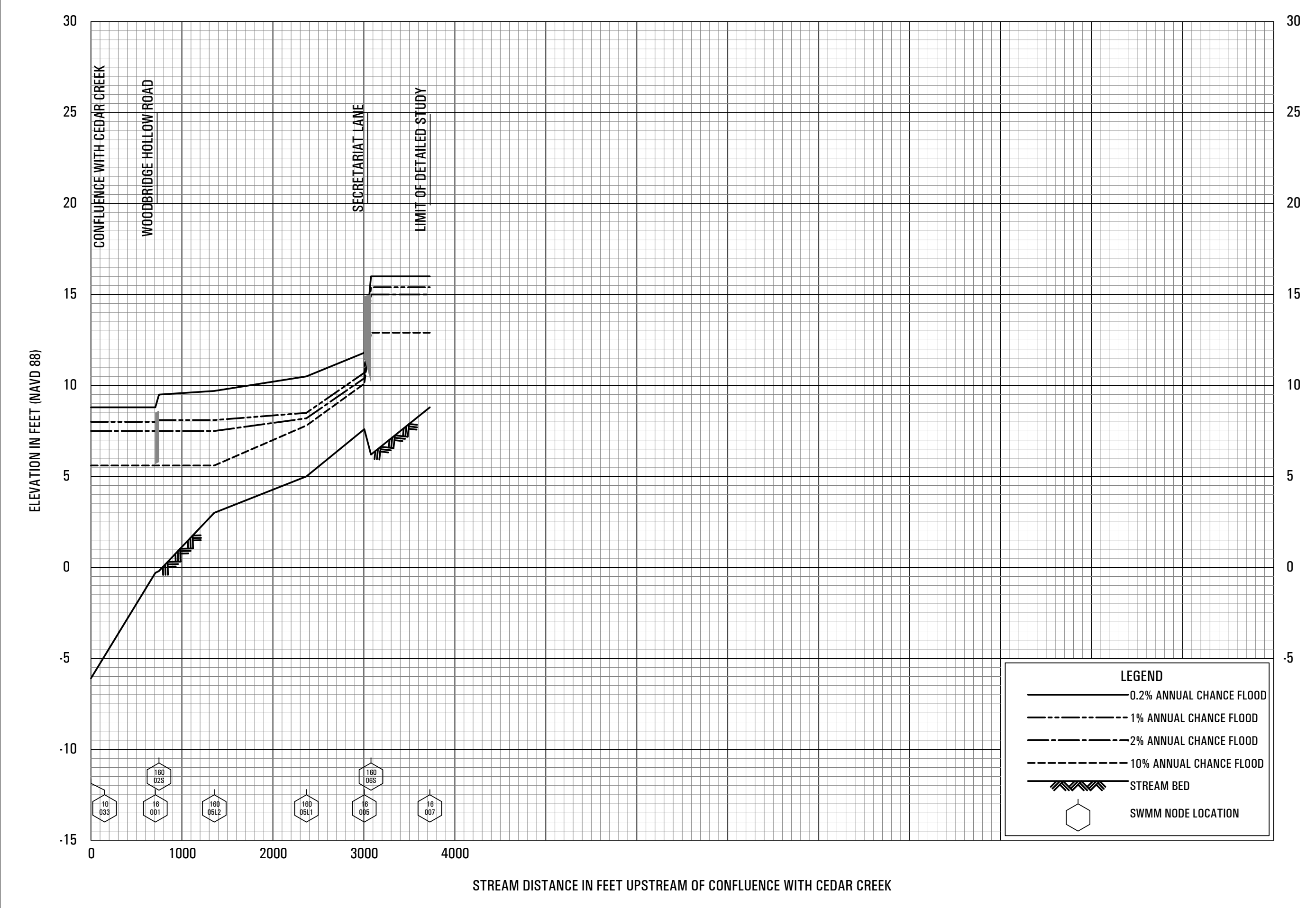
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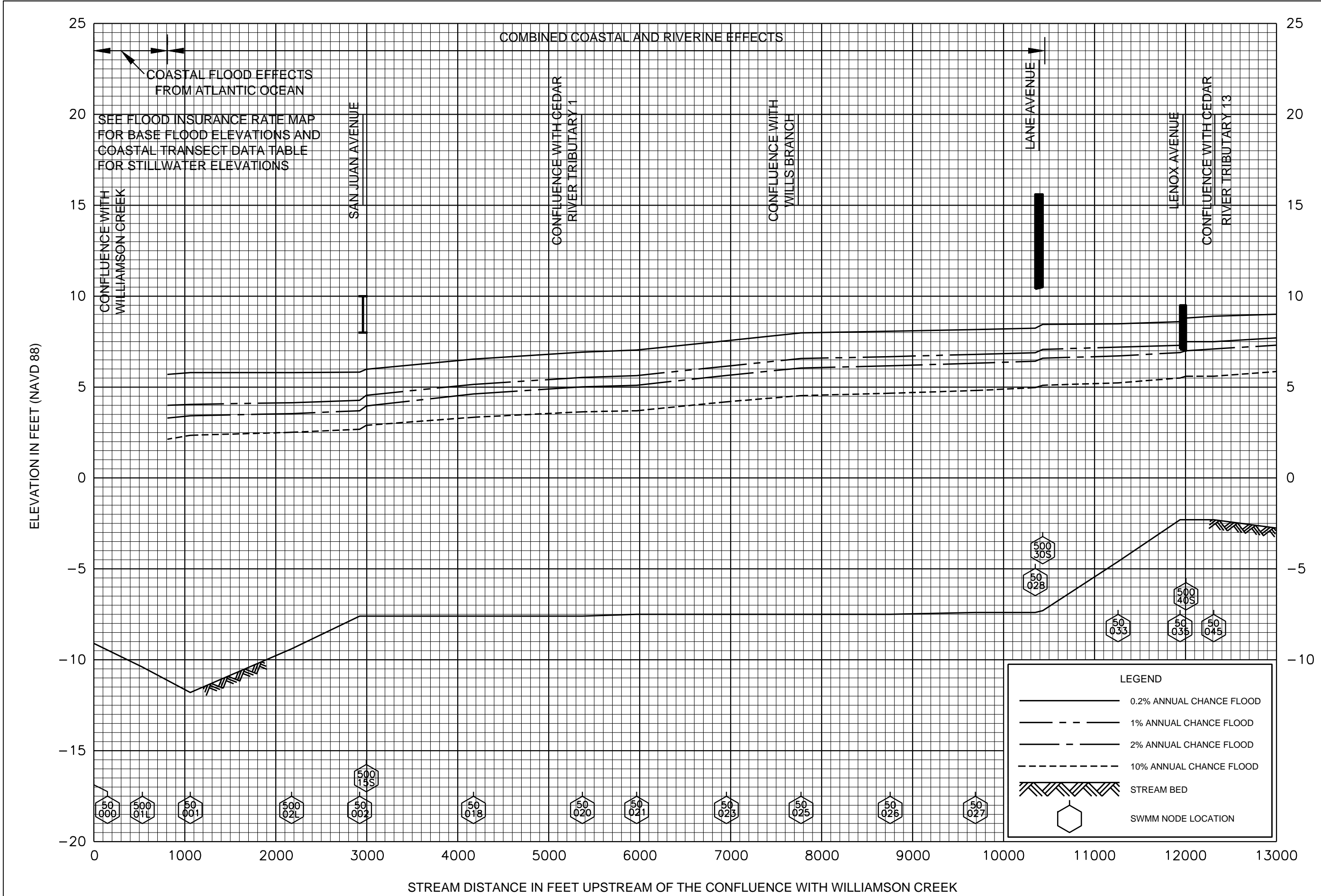
CEDAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FL
(ALL JURISDICTIONS)





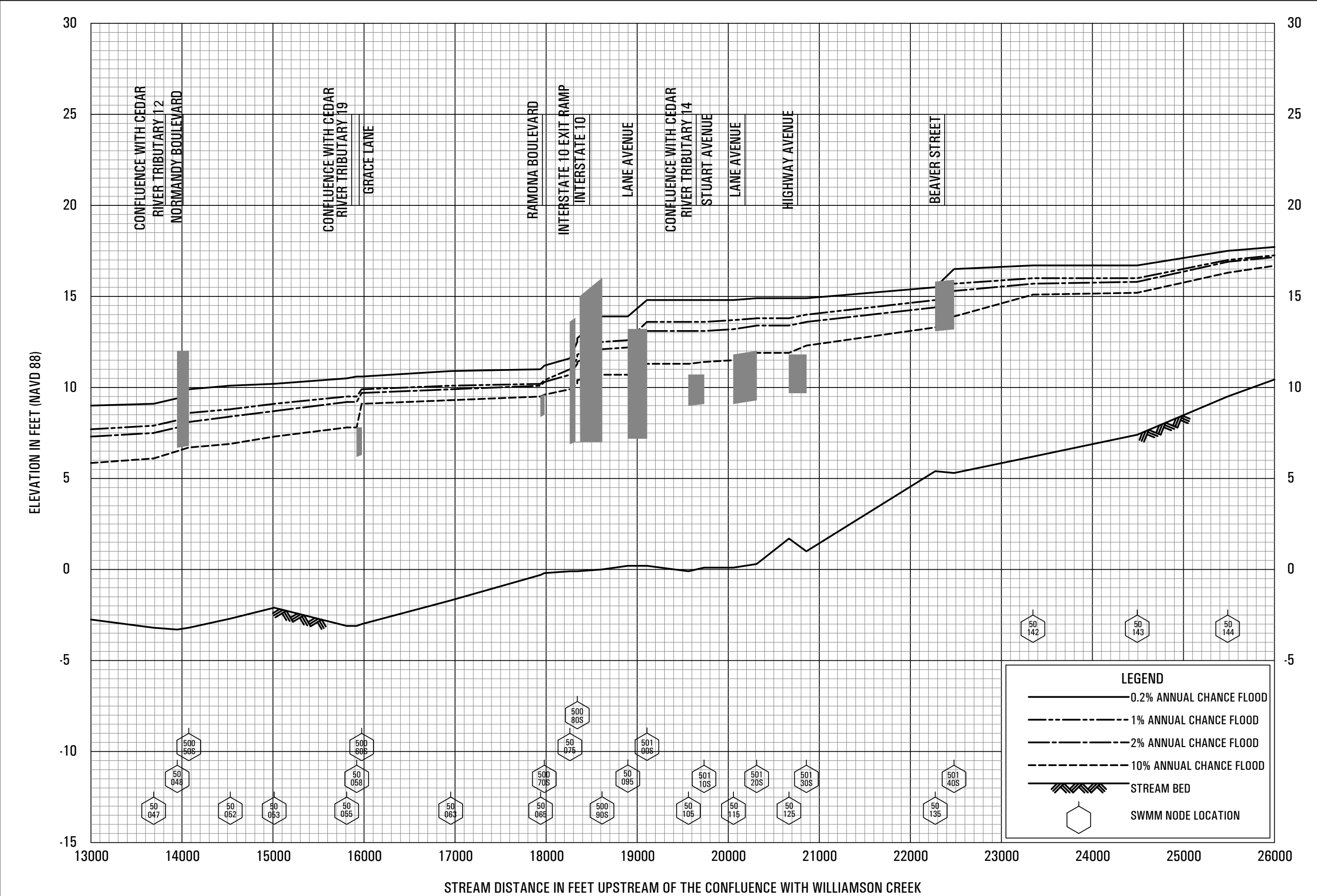


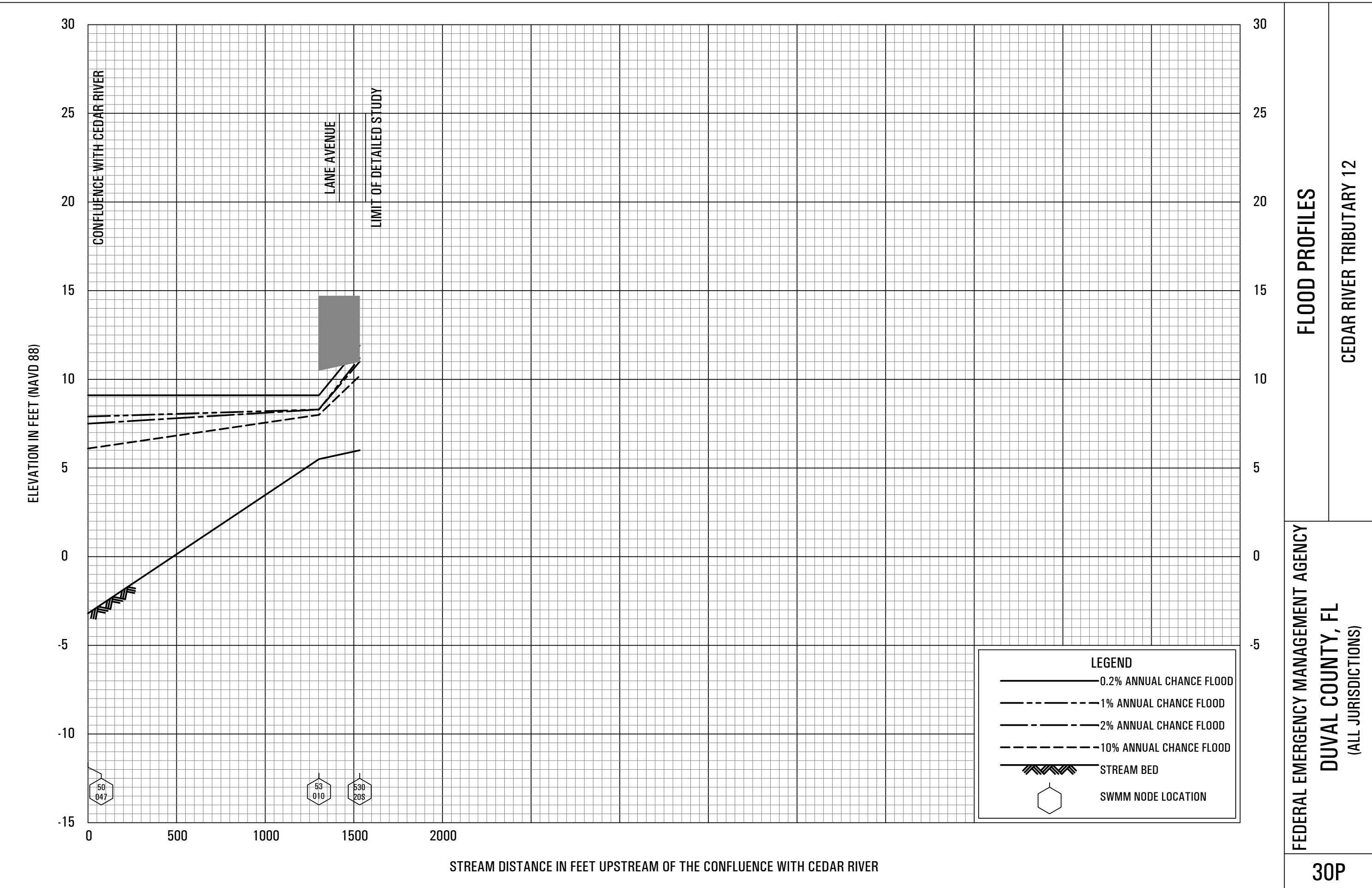
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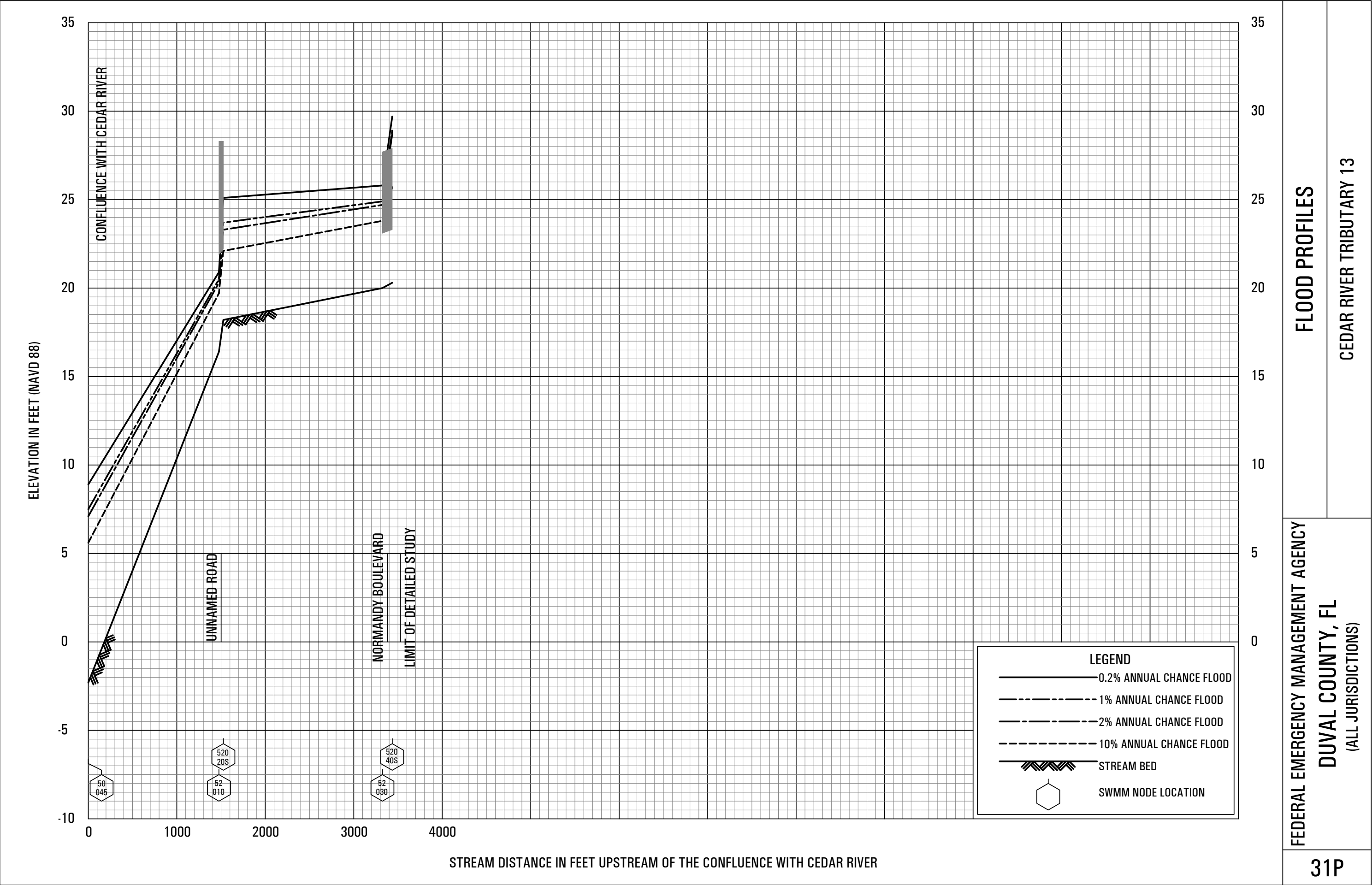
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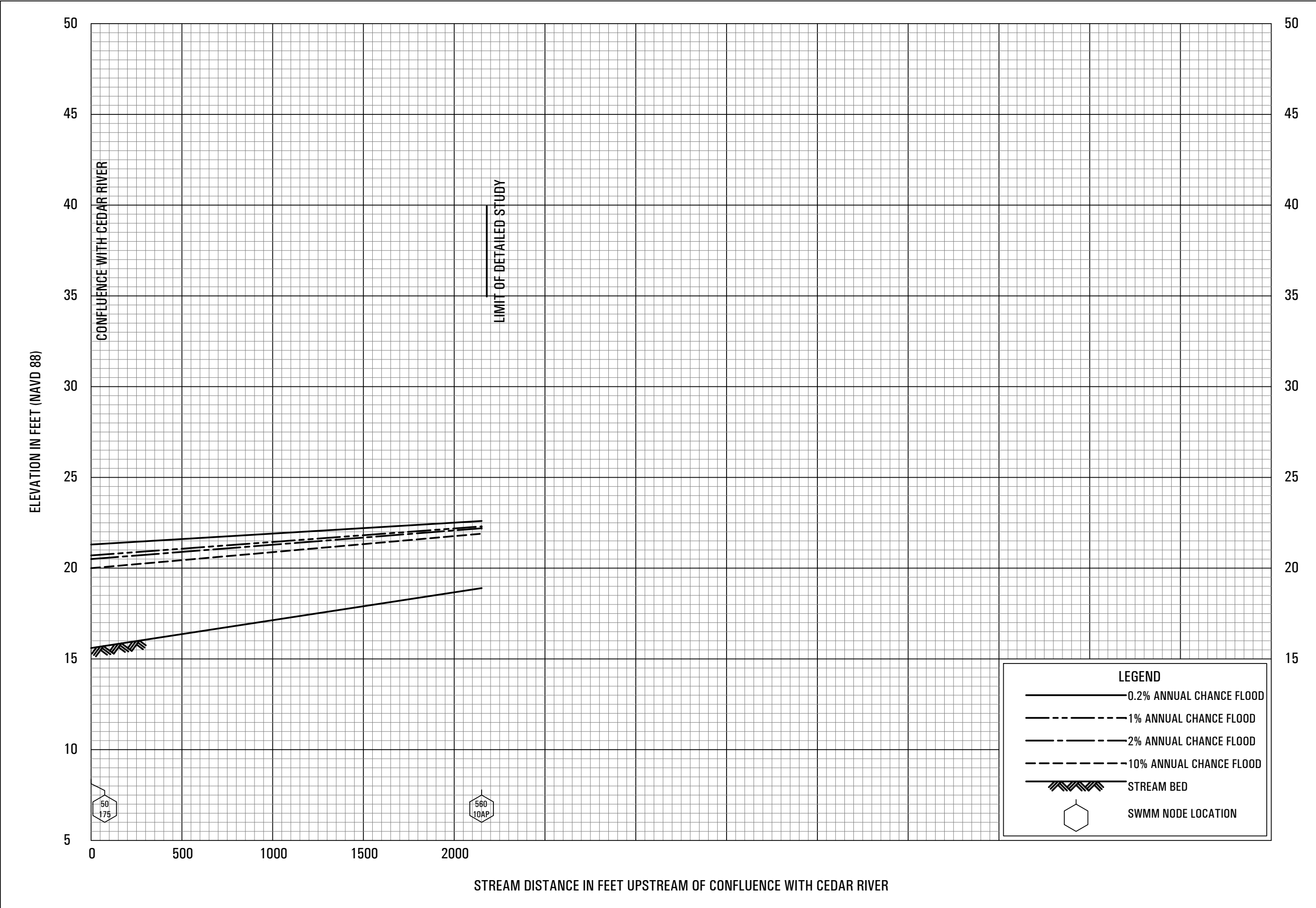
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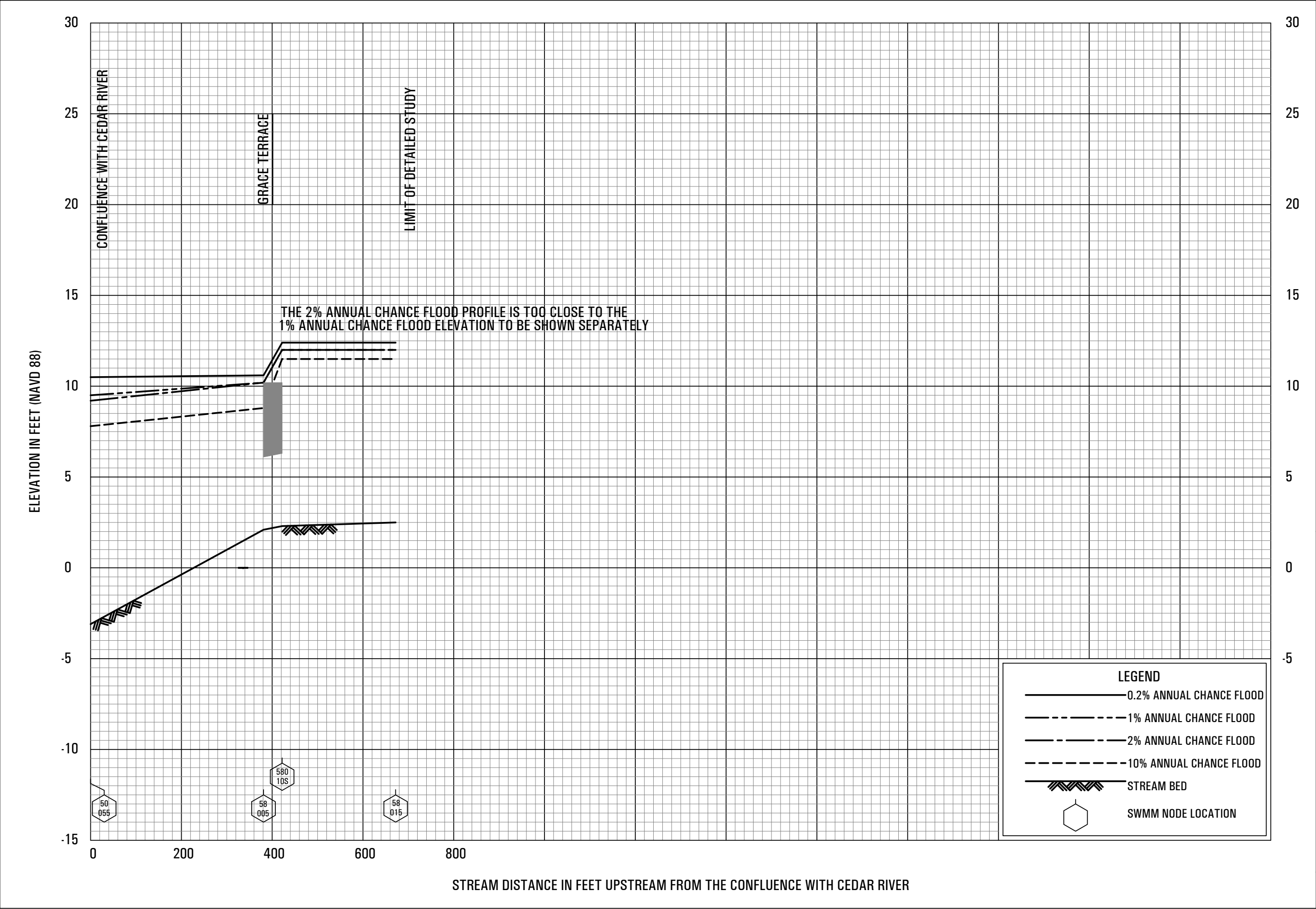
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(ALL JURISDICTIONS)



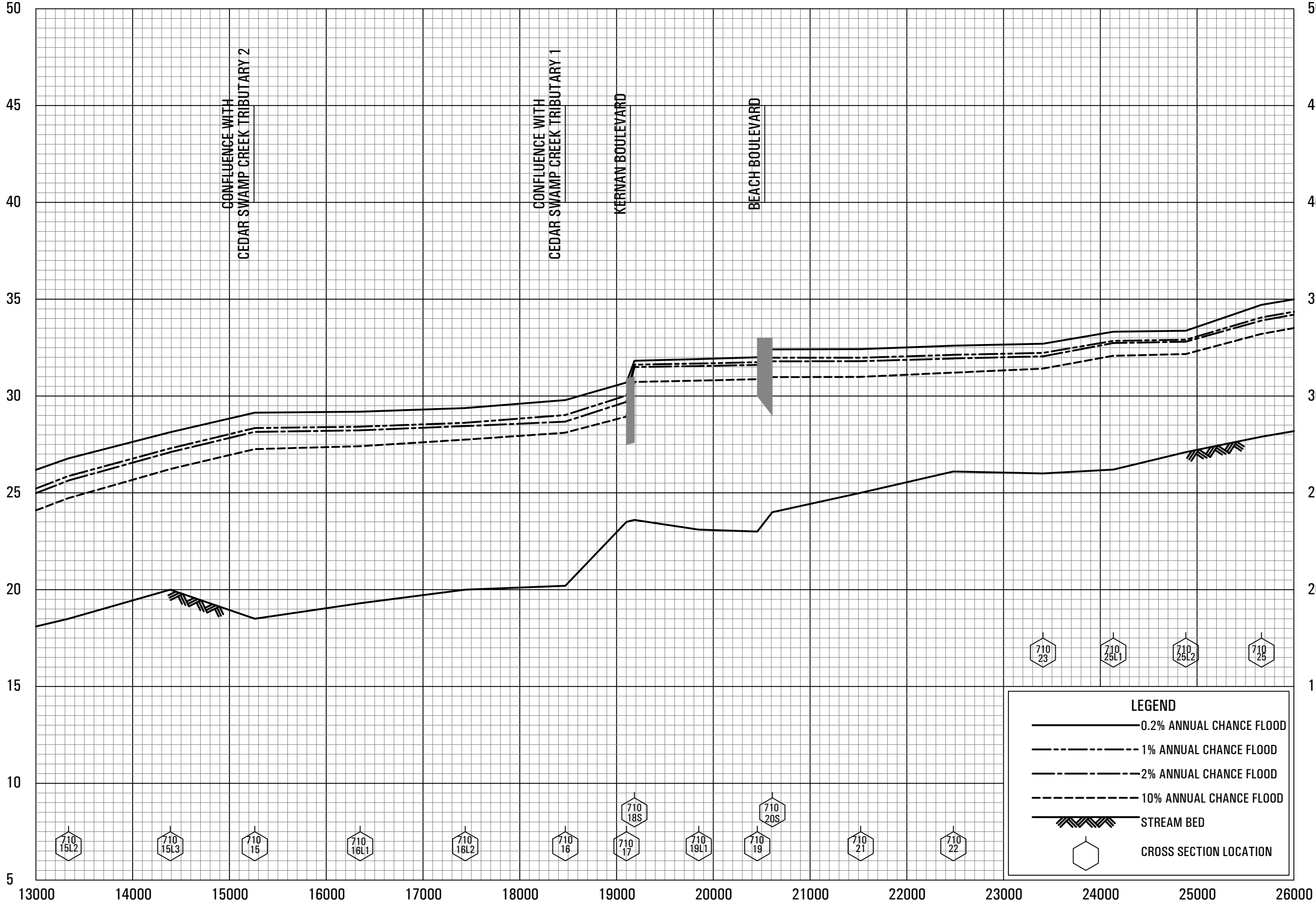








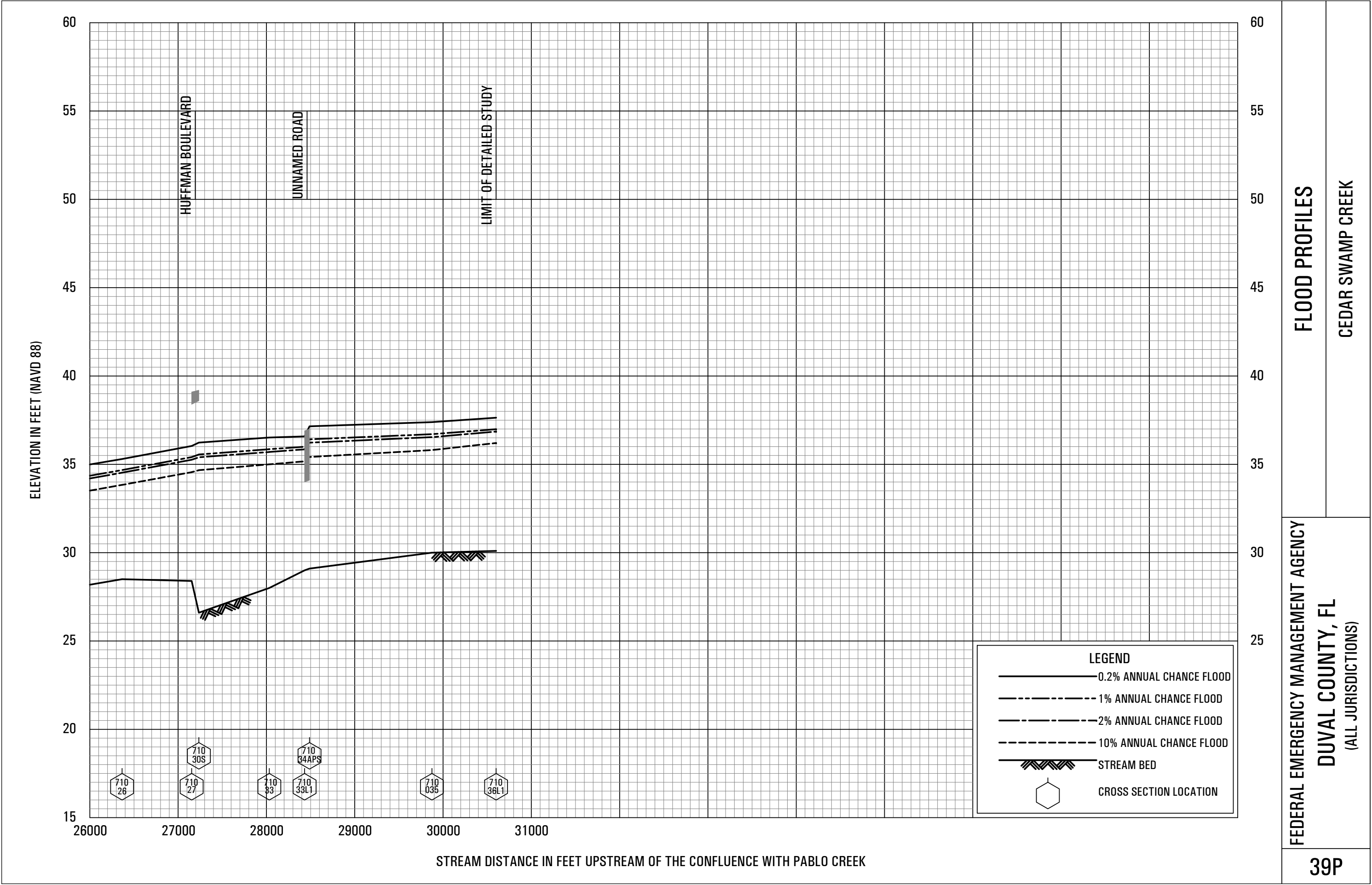
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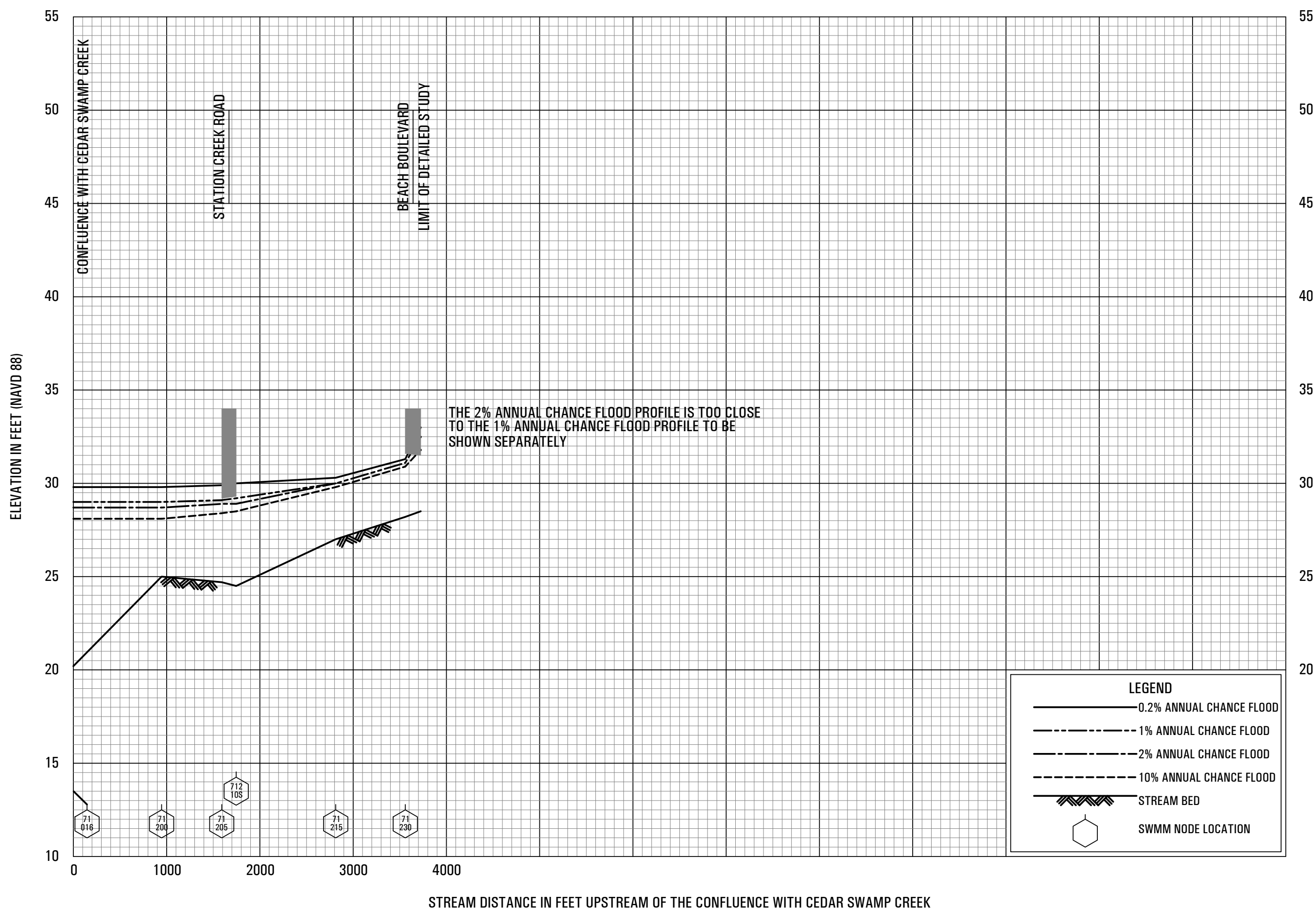


FLOOD PROFILES

CEDAR SWAMP CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FL
(ALL JURISDICTIONS)



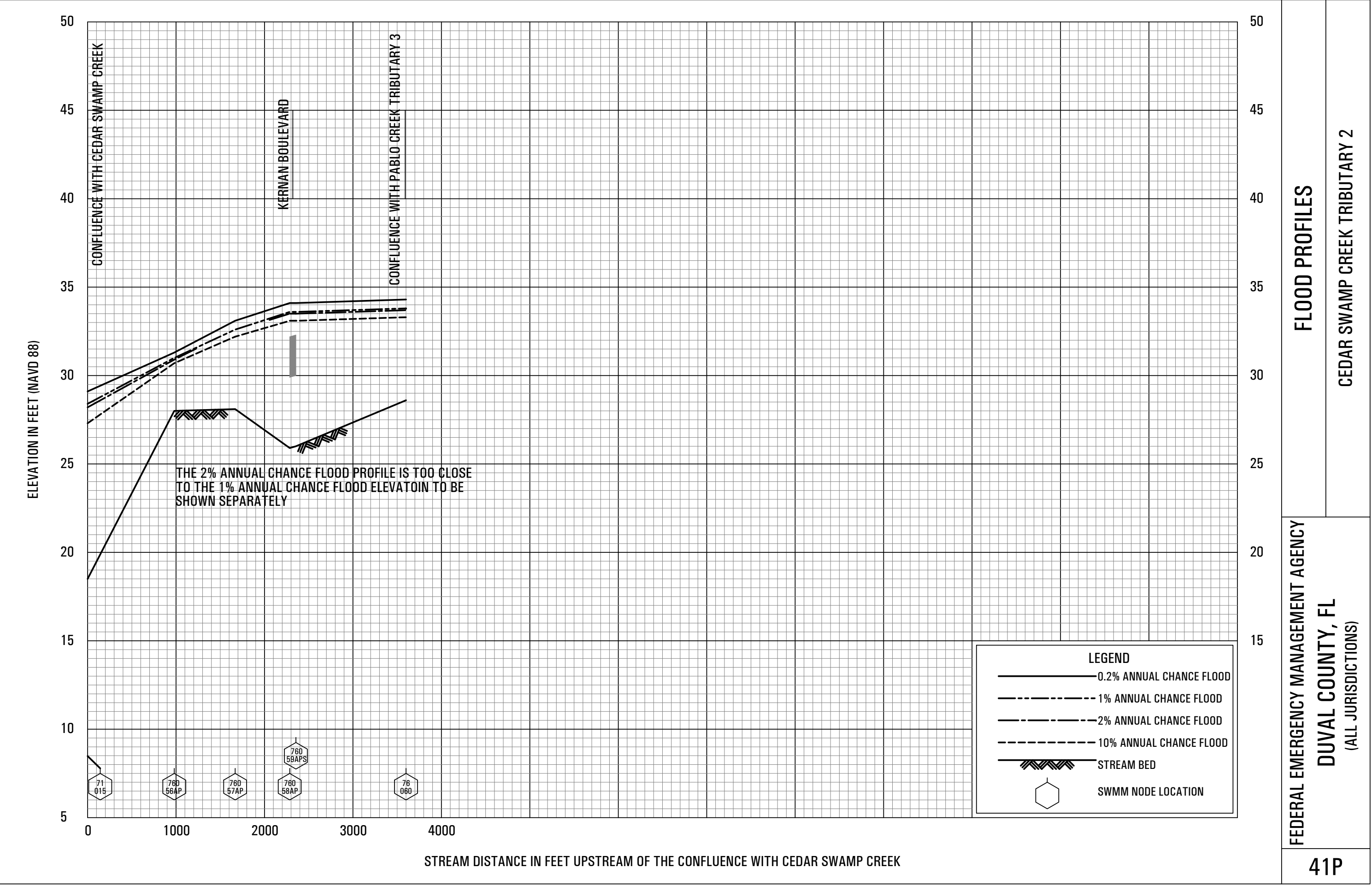


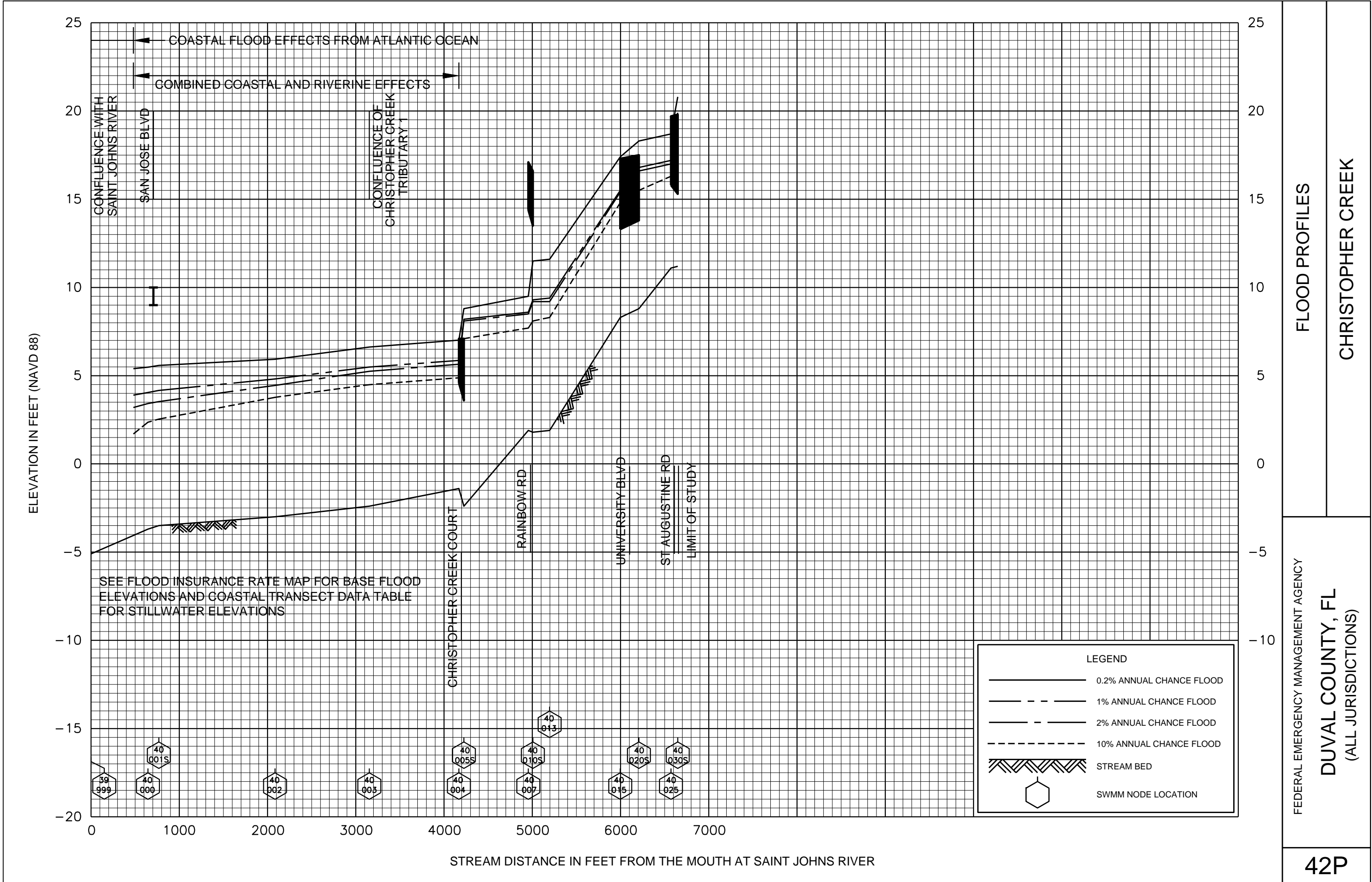
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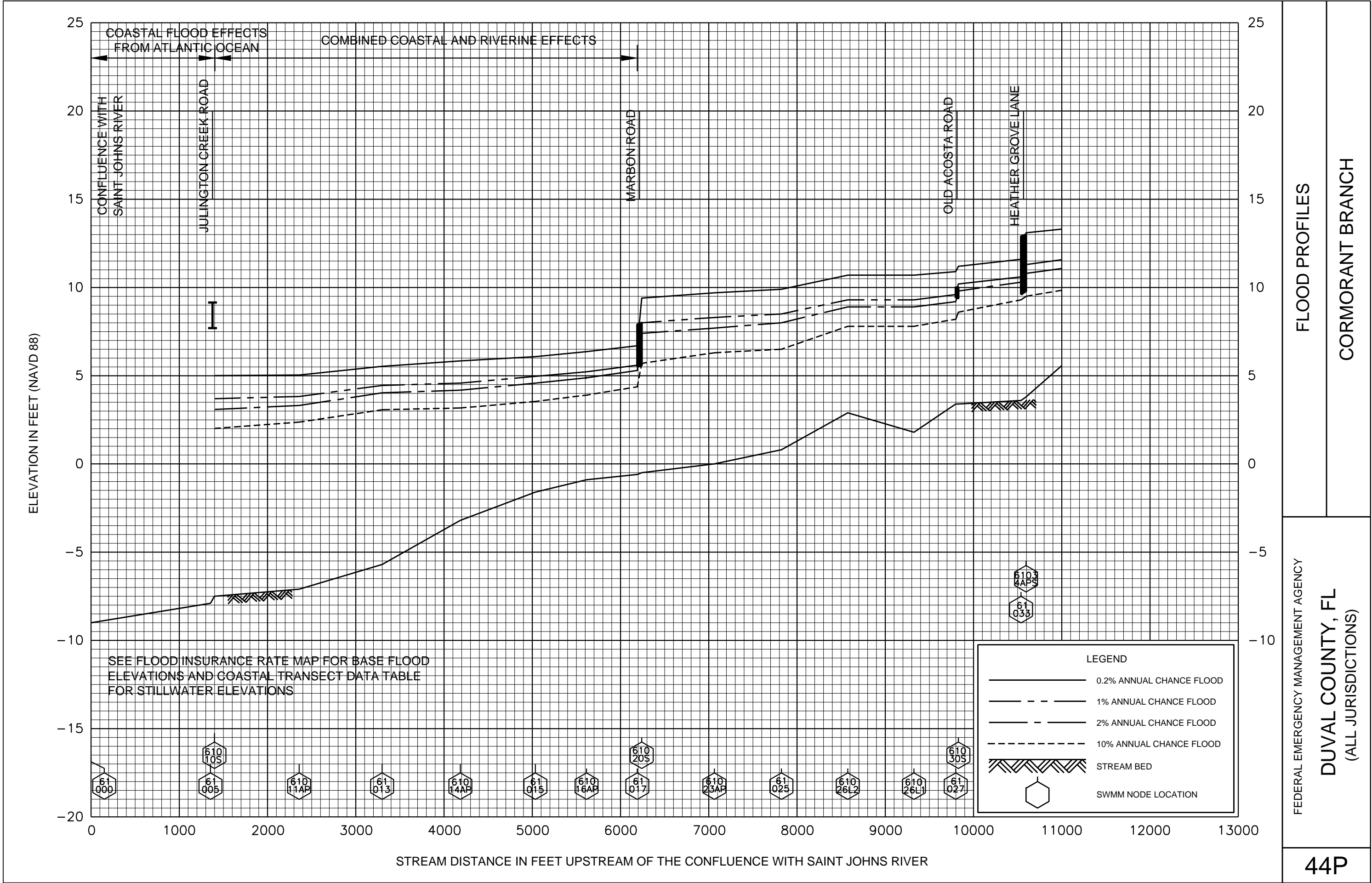
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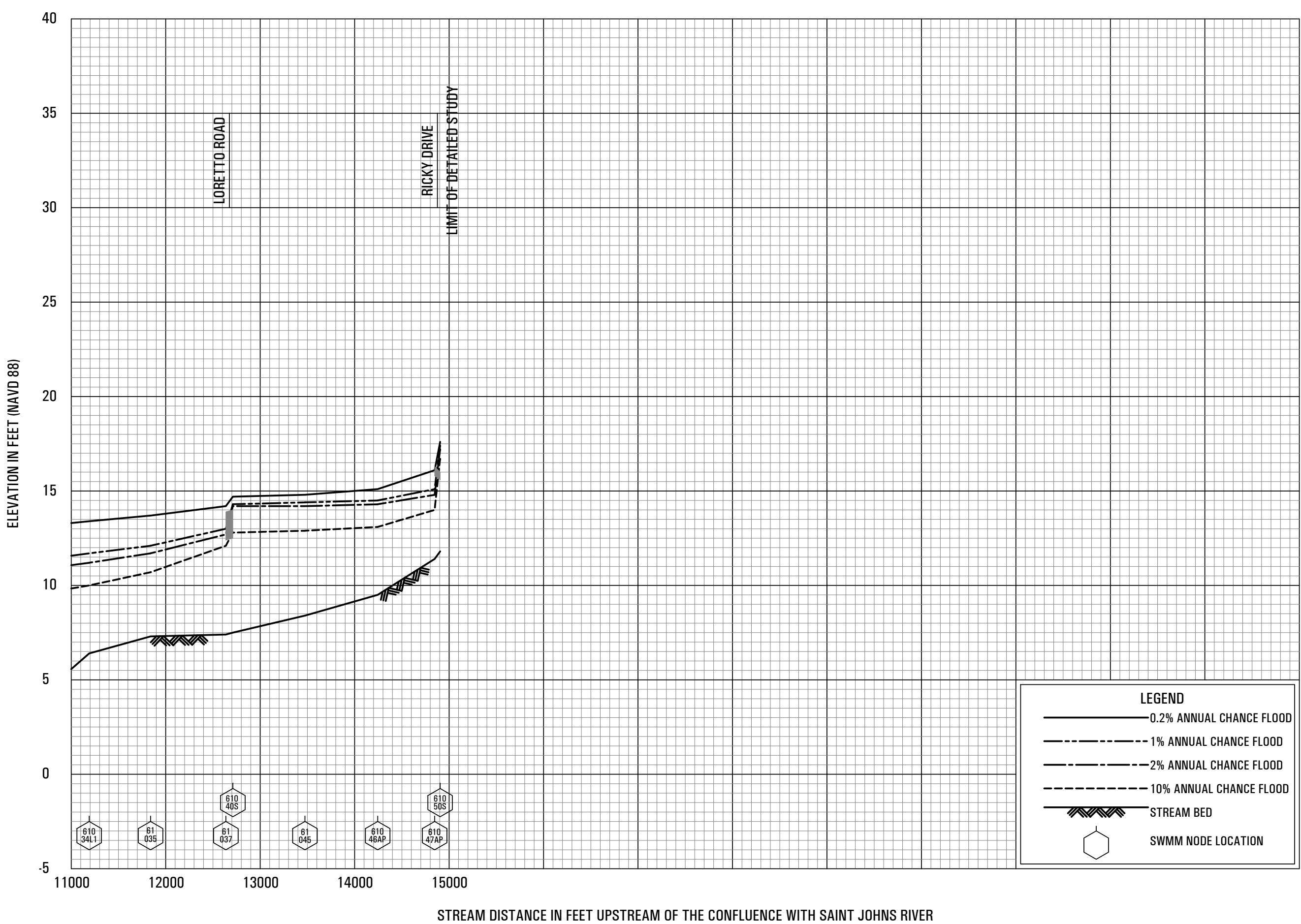
FEDERAL EMERGENCY MANAGEMENT AGENCY

DUVAL COUNTY, FL
(ALL JURISDICTIONS)





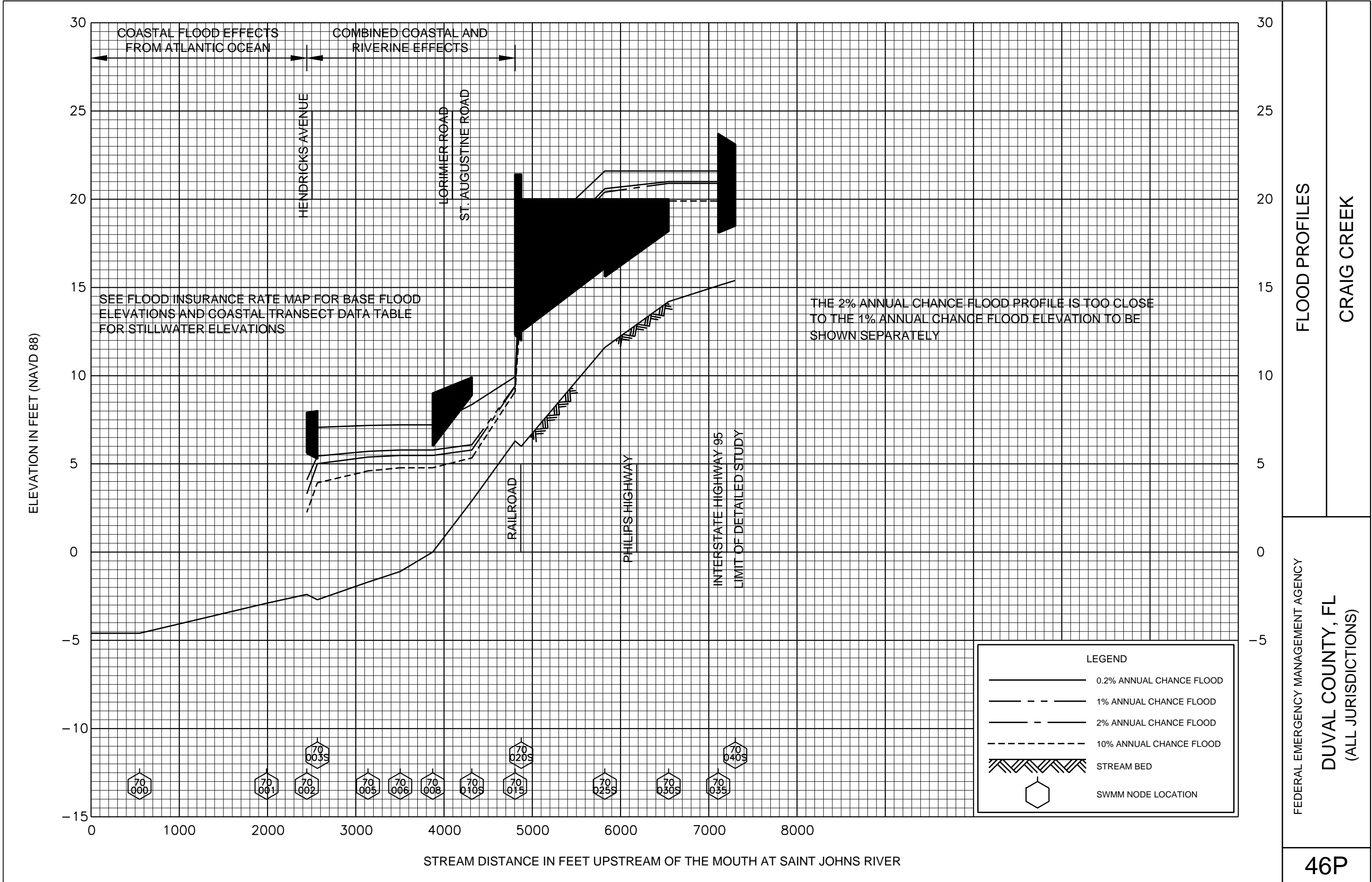


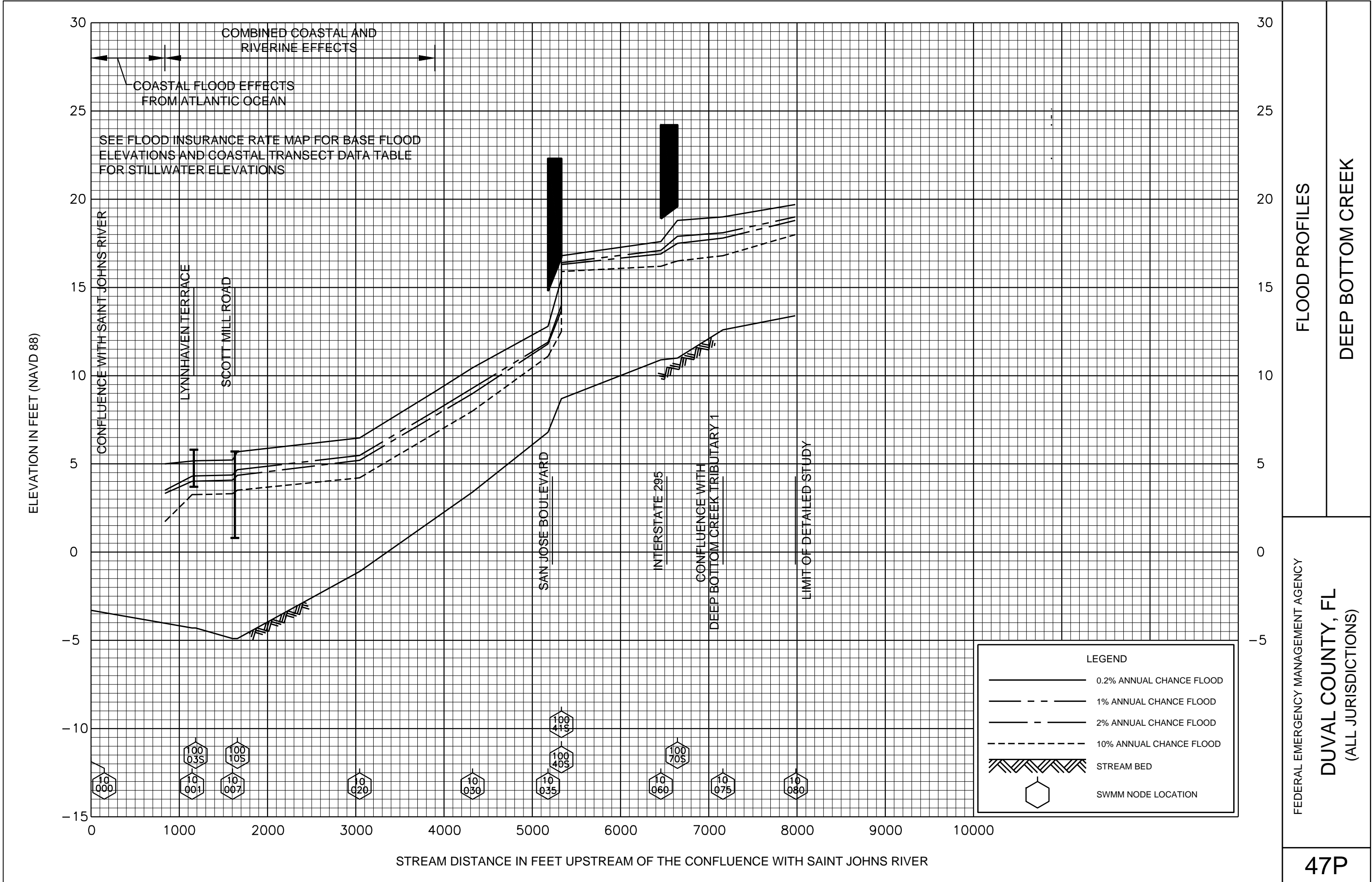


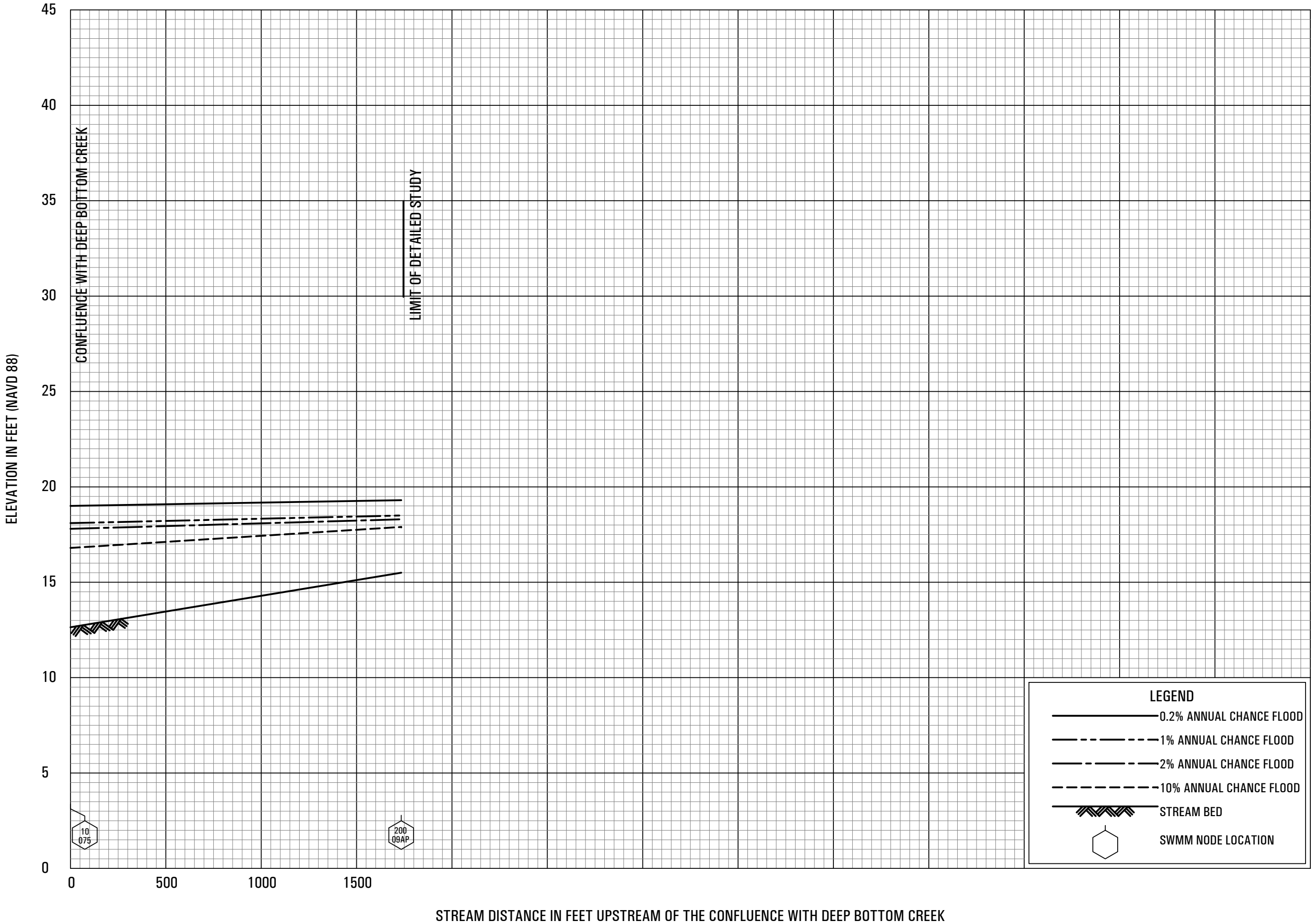
FLOOD PROFILES

CORMORANT BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FL
(ALL JURISDICTIONS)





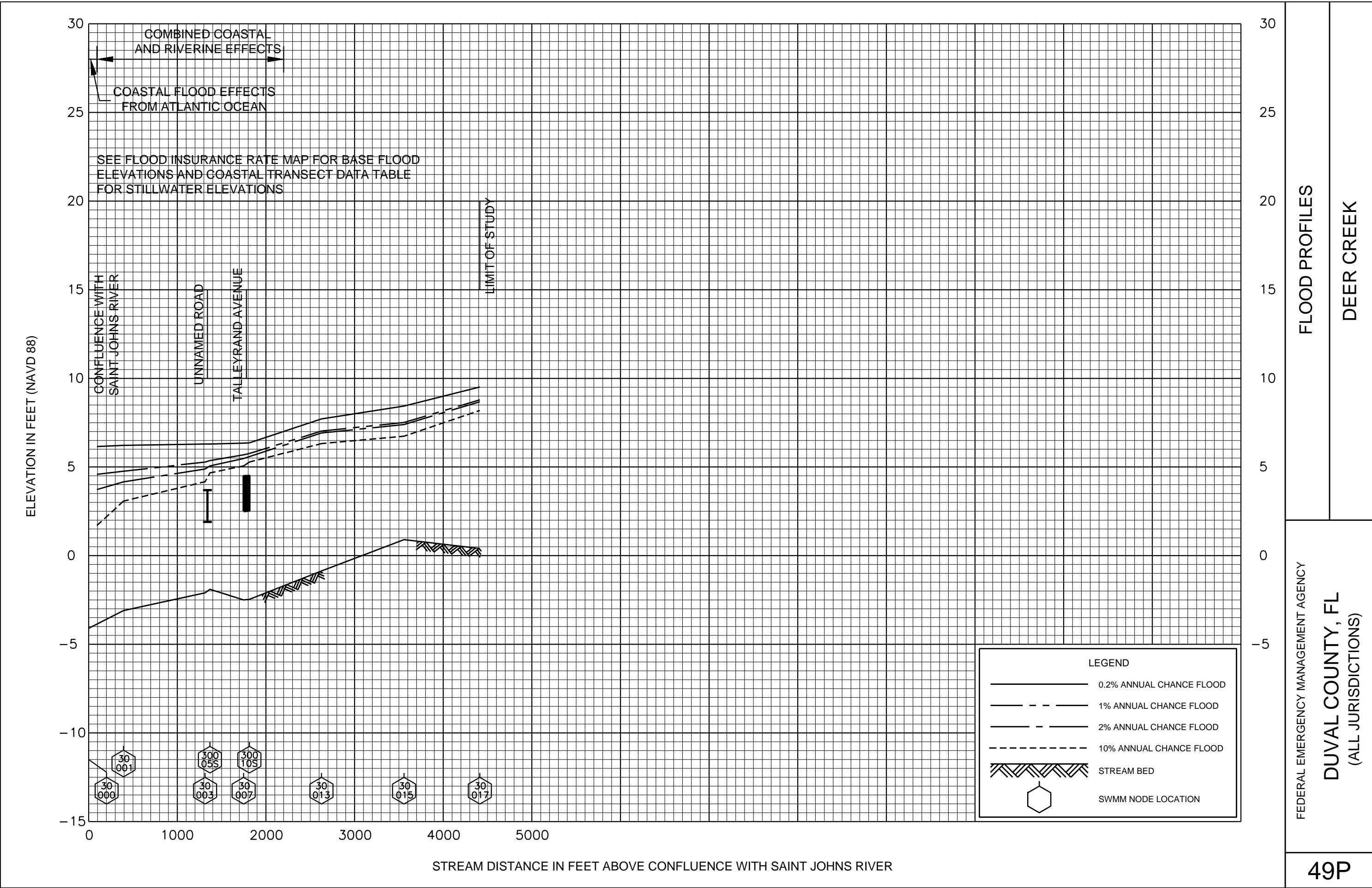


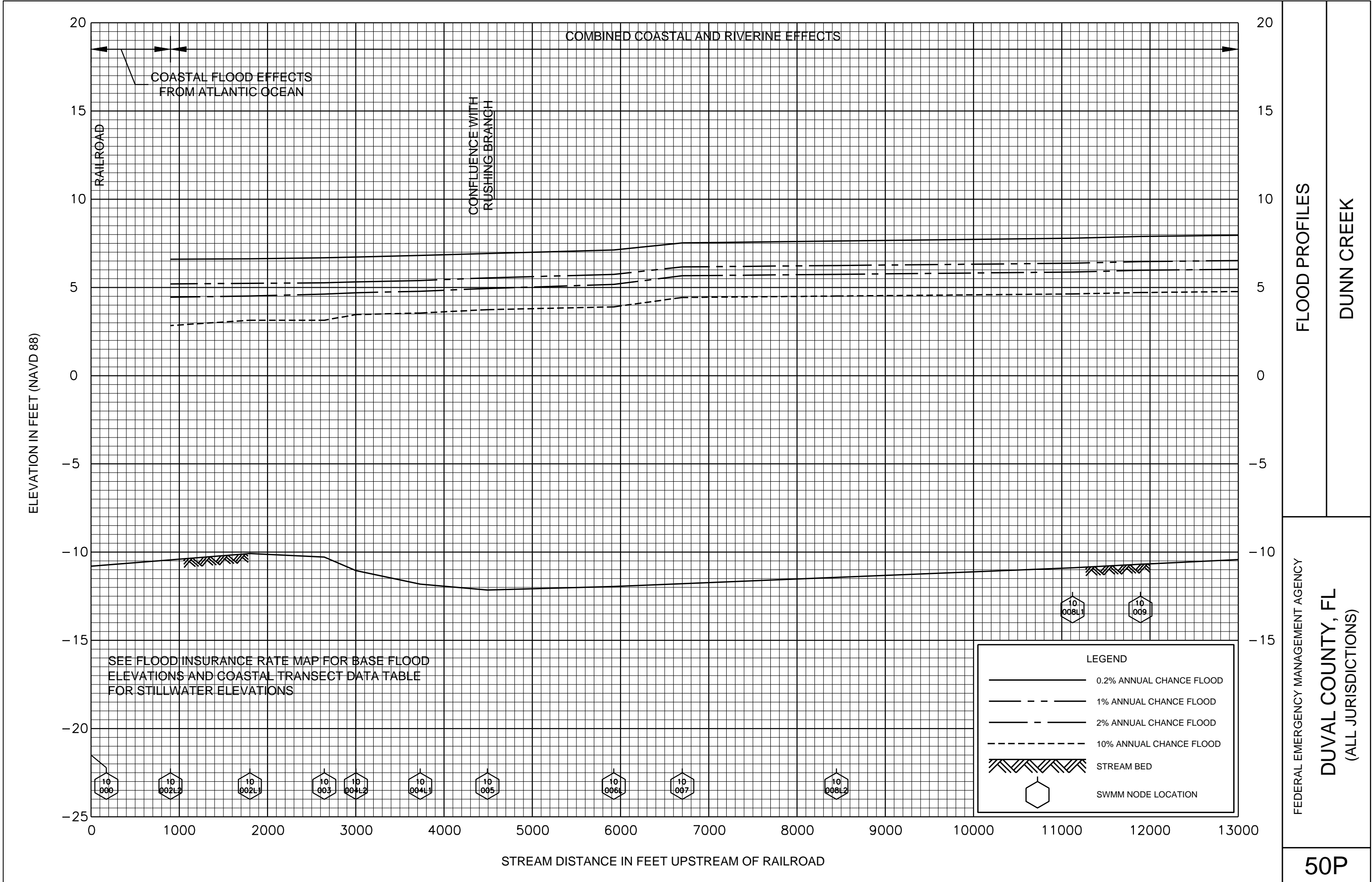
FLOOD PROFILES

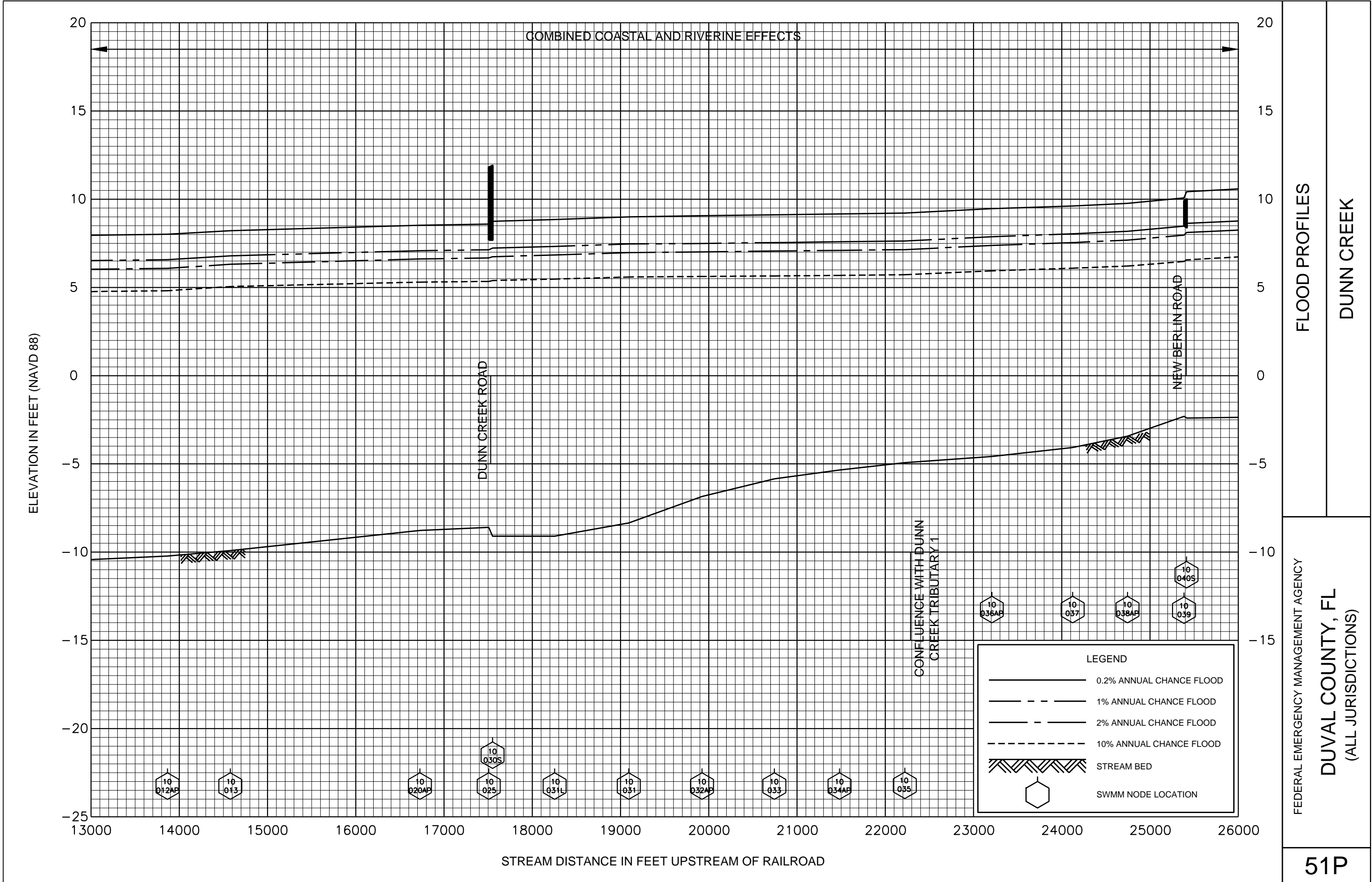
DEEP BOTTOM CREEK TRIBUTARY 1

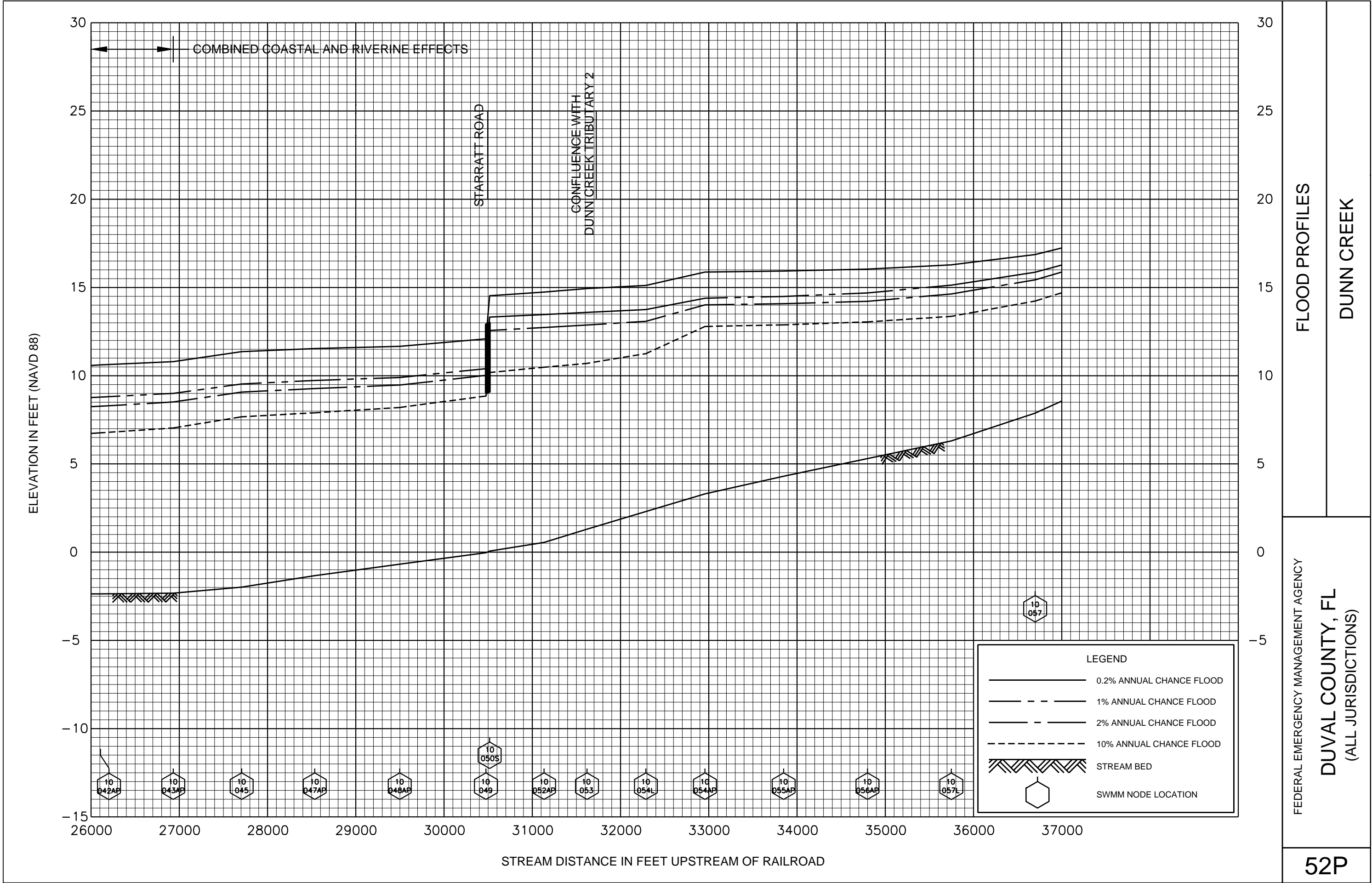
FEDERAL EMERGENCY MANAGEMENT AGENCY

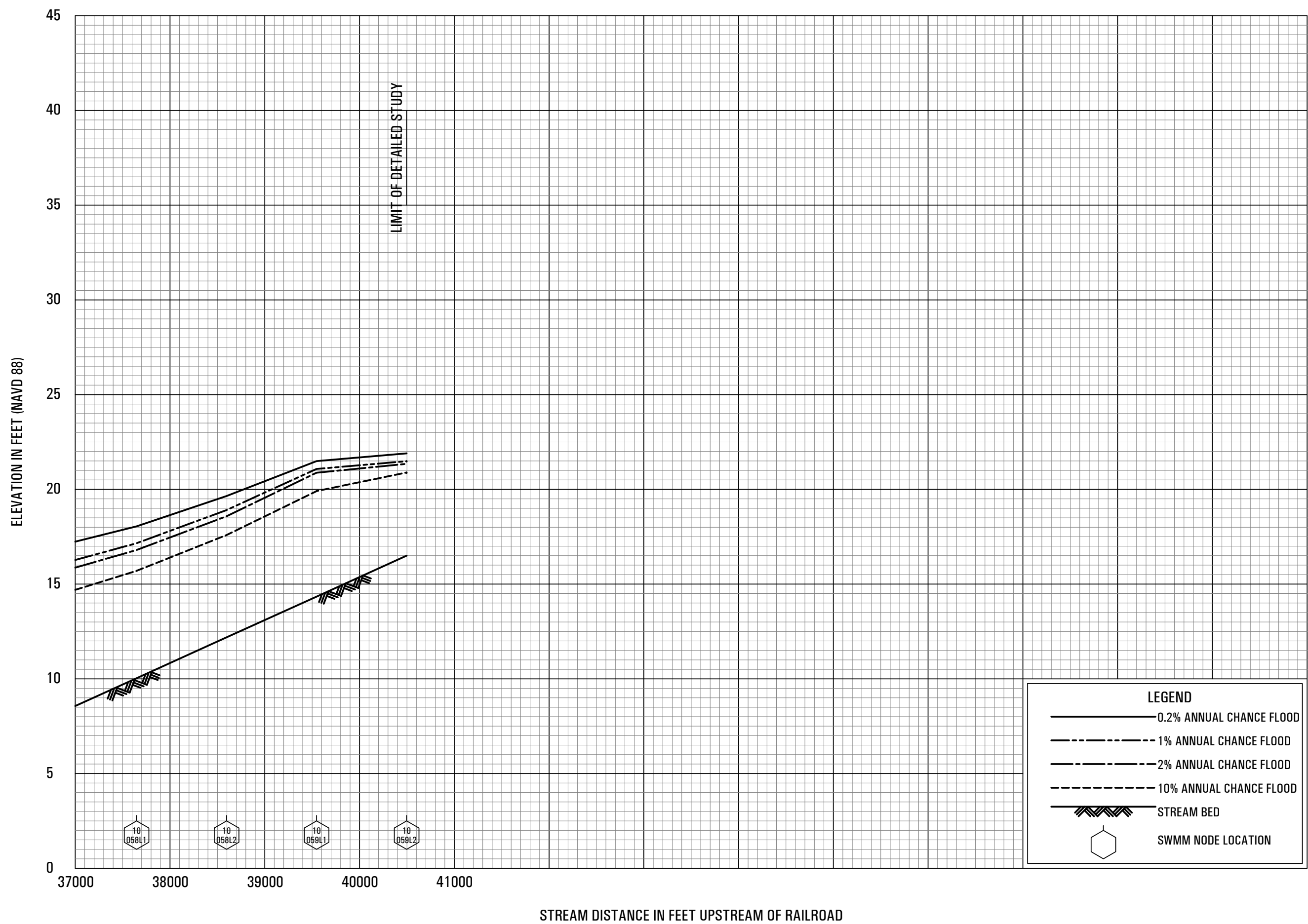
DUVAL COUNTY, FL
(ALL JURISDICTIONS)







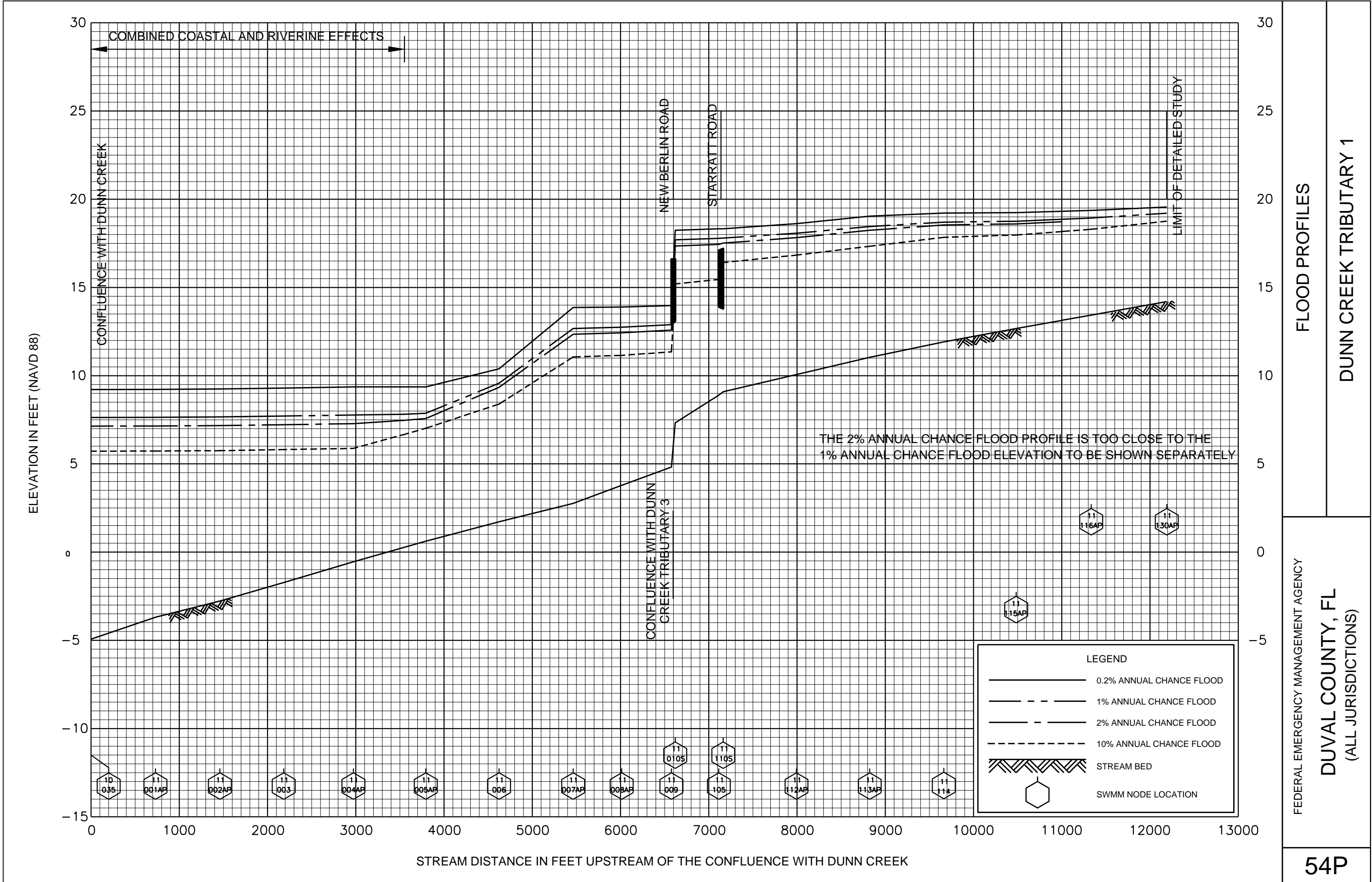


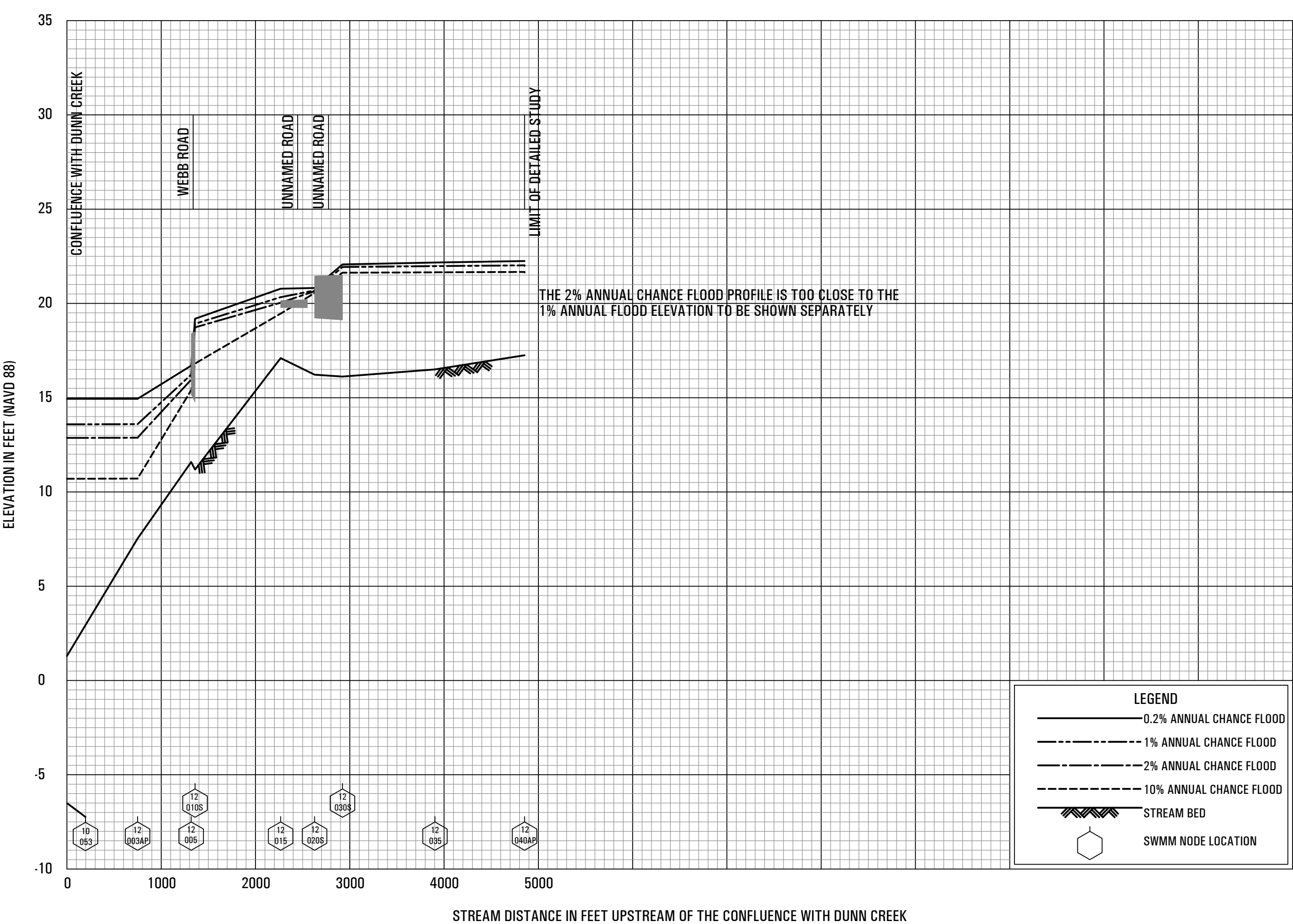


FLOOD PROFILES

DUNN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FL
(ALL JURISDICTIONS)

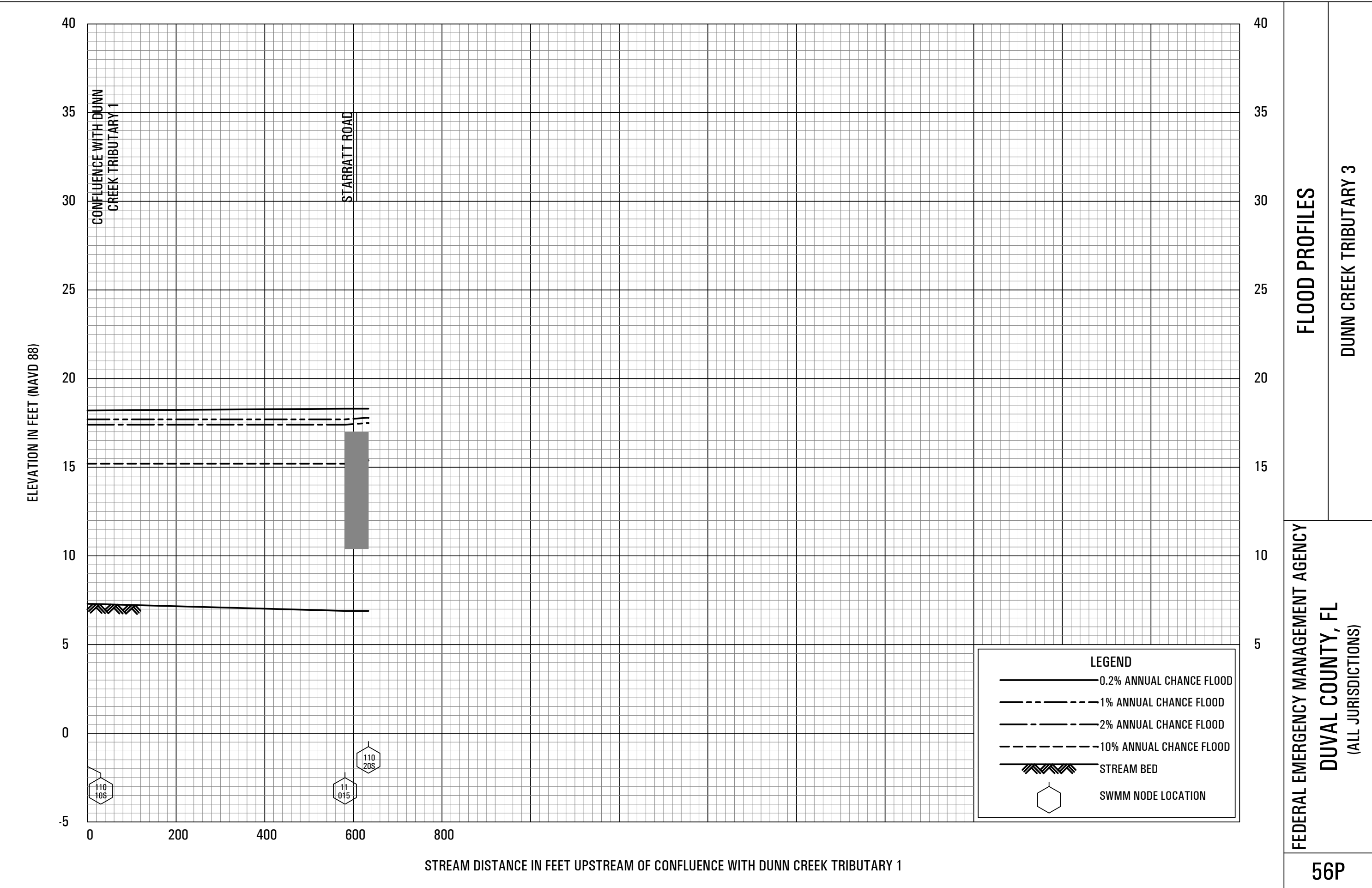




FLOOD PROFILES

DUNN CREEK TRIBUTARY 2

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FL
(ALL JURISDICTIONS)



FLOOD PROFILES

DUNN CREEK TRIBUTARY 3

FEDERAL EMERGENCY MANAGEMENT AGENCY
DUVAL COUNTY, FL
(ALL JURISDICTIONS)